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THE PROBLEM OF VOCATIONAL GUIDANCE

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THE PROBLEM OF VOCATIONAL GUIDANCE

BY

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PREFACE

This book has been written from the point of view that vocational guidance is an educational service which should be considered an essential and integral part of a program of public education. At the same time it is recognized throughout the discussion that guidance involves a number of specialized activities each of which calls for a technique of its own. Most of the book is devoted to a consideration of these activities, their place in a city school system, and the organization which makes possible their most effective functioning. Attention is given also to intelligence and other standardized tests in relation to guidance, and to vocational guidance in rural schools and in colleges. Most of the material here presented has been used by the author in his classes.

Some readers may wonder why educational guidance is not given consideration, and may raise the question whether much that is discussed is not after all educational rather than vocational guidance. As conceived by the writer, vocational guidance includes most of that which is usually connoted by the term educational guidance. The latter has its foundations in abilities, aptitudes, interests, and limitations which are significant in relation to vocational choice, and deals with helping the individual to plan an educational program which must be related quite definitely to this choice.

It has seemed wise, therefore, not to give special consideration to educational guidance but to assume that it will receive adequate attention in a comprehensive program of vocational guidance.

Since the effort which is made in these pages is to present in comparatively brief and concise form the problem of vocational guidance as a whole, the treatment of the subject is such as should make the book interesting and valuable to superintendents of schools, school principals, junior and senior high school teachers, social workers, and parents, as well as to those who are more directly engaged in guidance activities.

The author wishes gratefully to acknowledge his indebtedness to several of his colleagues for helpful criticisms and suggestions and to numerous publishers and authors for the privilege of quoting, in a few cases at some length, from their publications.

GEORGE E. MYERS

ANN ARBOR, MICHIGAN,
August, 1927.

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THE PROBLEM OF VOCATIONAL GUIDANCE

CHAPTER I

PRESENT METHODS OF ENTERING OCCUPATIONS

The annual transfer from school to occupations. Nearly 1,000,000 boys and young men and approximately 500,000 girls and young women in the United States each year face the problems involved in entering wage-earning occupations. For them school days are over. The business of earning a living confronts them. Responsibility for "pulling their own weight" and making, if possible, some slight additional contribution to society rests upon them. They *must* find places for themselves somewhere, somehow, in the busy, whirling mechanism of the world's work. There are important facts to be recognized concerning this annual army of recruits and concerning the occupations awaiting them, and it is our purpose here to point out these facts.

Age differences among those who transfer. These recruits range in age from ten years to twenty-five years and beyond. Approximately two thirds of them are under eighteen years of age. It should be kept in mind, however, that the number beginning employment under eighteen years has been decreasing for some time and will probably continue to decrease.

The latest data available on the number of young workers of different ages are given in the following table:

NUMBER AT DIFFERENT AGES ENGAGED IN WAGE-EARNING OCCUPATIONS IN THE UNITED STATES [1]

AGE	MALES	FEMALES	TOTAL
10 to 13	258,259	119,804	378,063
14 and 15	455,989	226,806	682,795
16	501,134	277,823	778,957
17	602,322	331,369	933,691
18 and 19	1,443,968	802,236	2,246,204
20 to 24	4,121,390	1,909,075	6,030,465

Burdge [2] found in 1918 that 85.6 per cent of all boys 16, 17, and 18 years of age in New York State were out of school. This was during the last year of the World War when the demand for young workers was unusually strong.

Differences in preparation. These young people enter wage-earning careers with a great variety of educational preparation, ranging all the way from complete illiteracy to the finest kind of professional training, though two thirds do not go beyond the eighth grade. The United States census for 1920 shows that almost 6 per cent of the population ten years of age and over was then illiterate. According to the same authority, between 3 per cent and 3.5 per cent was engaged in the practice of the professions. It should be noted, however, that not all those practicing the

[1] United States Census, 1920.

[2] Burdge, Howard G. — *Our Boys*, p. 33.

professions, or even all those now entering the professions each year, have obtained a high-grade professional education.

The following table presents the situation as it existed a few years ago as far as the great mass of those leaving school for employment is concerned. The proportion remaining in the high school grades and in the college years has increased considerably since the investigation, upon which this table is based, was made, but no comprehensive data of more recent date are available.

TABLE [1] SHOWING THE NUMBER OF PUPILS OUT OF EACH "1000 ENTERING THE FIRST FIVE ELEMENTARY GRADES" WHO SURVIVED IN LATER GRADES.

Grade	*Number of Survivors*
Sixth	834
Seventh	710
Eighth	642
First year high school	342
Second year high school	246
Third year high school	181
Fourth year high school	150
Graduates	139

Of the one hundred thirty-nine who graduated from high school, seventy-two entered college (not including normal schools and teachers' colleges); fifty-two reached the second year; thirty-nine, the third year; thirty, the fourth year; and twenty-three finally graduated from college.

Differences in general intelligence. It has been established by mental-alertness tests that these young people enter employment with varied endowments of

[1] U. S. Bureau of Education investigation, 1918.

general intelligence. Man has long recognized the imbecile on the one hand and the exceptionally capable on the other, but only in the last two decades have serious efforts been made to chart the levels of intelligence between these two extremes. According to the well-known results of the army intelligence tests given to 1,700,000 men in service during the World War, approximately 4.5 per cent were found to possess very superior intelligence; 9 per cent, superior intelligence; 16.5 per cent, high average intelligence; 25 per cent, average intelligence; 20 per cent, low average intelligence; 15 per cent, inferior intelligence; and 10 per cent, very inferior intelligence. Even if, as some have claimed, the army draft did not give a fair cross section of American life, here is striking and significant evidence of marked differences in intelligence among those who transfer from school to employment.

Differences in special aptitudes and interests. These young people entering the world's work each year differ enormously in special aptitudes and interests. While scientific investigation in the field of special aptitudes is still in its infancy, practical experience long ago made it clear that differences of this character exist. Artistic, musical, literary, military, and other geniuses of the past are good illustrations of the possession of special aptitudes to a marked degree, coupled with exceptional opportunity for their development. Modern business and industry, aided by the contribution of modern psychology, are making it increasingly clear that the possession of special aptitudes is not limited to geniuses but is widely distributed and applies to an immense number of the more prosaic occupa-

tions as well as to the artistic and unusual. This subject will be considered at greater length in a later chapter.

Differences in temperament and emotional stability. Moreover, there are important differences among these young recruits to the world's work in temperament and emotional stability. One is quiet, reserved, a poor "mixer"; another is talkative, effusive, makes acquaintances easily. One likes to be alone and to work with things; another prefers to be in a crowd and to work with people. One is stolid, phlegmatic, impervious to nervous shock; another is high-strung, quick to react to the slightest stimulus, excitable. Others range all the way between these extremes and combine temperamental and emotional qualities in various ways.

Physical differences. Again, there are great natural differences in physique, in strength, in endurance, in susceptibility to disease; for example, to tuberculosis. Some start life's work with weak hearts. And some are obliged to begin their wage-earning careers with such definite physical handicaps as partial or total deafness or blindness, or a crippled condition resulting from infantile paralysis, or accident or other cause.

Differences in personality and character traits. Finally, these young recruits to the world's work face wage-earning with important differences in personality and character traits not included under any of the above headings. Due to heredity or early environment or both, some are energetic, others are lazy; some are highly ambitious, others are comparatively indifferent to future advancement; some are persistent

and determined to carry through whatever is undertaken, others are changeable and easily discouraged; some are courageous and daring, others timid and afraid in the presence of the unusual; some possess a high degree of initiative and leadership, others prefer routine activities and following those who take the lead; some are trustworthy and dependable, others are dishonest and unreliable.

Corresponding differences in occupations. On the other hand there is a great variety of occupations calling each year for a veritable army of new workers and ready to absorb all or nearly all who are available. The number of different occupations in the United States is usually placed by writers at 2000 to 3000. This number is constantly changing, and it is impossible to fix it definitely at any time because there is no agreement as to how one man's work must differ from another's in order to be called a distinct occupation. Payne [1] states that there are 17,000 occupations in New York City, but does not indicate how he arrived at this number.

While these many occupations divide themselves naturally into groups as far as the qualifications required for success are concerned, each group calling for more or less similar qualifications, there are enormous differences in the requirements of occupations in different groups. Some call for youth; others demand a fair degree of maturity. Some require extensive education; others may be carried on successfully by illiterates. Some demand a high degree of intelligence;

[1] Payne, A. F. — "The Problem of the Try-Out Courses," *Industrial Arts Magazine*, May, 1925.

others are open to morons. Some call for special aptitudes of one kind; others for special aptitudes of a very different kind. Some require physical strength and endurance; others quickness and dexterity. Some are impossible to the stolid and phlegmatic; others are equally impossible to the high-strung and excitable. Some demand initiative and leadership; others require ability to do the same thing over and over again, day after day and week after week.

The transfer from school to employment not a single act but a process. How do these boys and girls and young men and women of such varied characteristics and qualifications find their way from school and college into the places they are to fill in this maze of occupations, with their widely differing demands and requirements?

In attempting to answer this question, it must be kept in mind that educational institutions, especially in the larger cities, are giving this problem more attention each year and that, as a result, methods of entering occupations are gradually changing in important respects. Then too, for most people, entering an occupation is not a single act which is completed the day after leaving school. It is, rather, a process beginning before school days are ended and extending over a considerable period after employment begins. For most people, it includes a consideration of what they would like to do, finding a first job, and then shifting from one job to another until somehow one of the jobs becomes a permanent occupation. The amount of shifting varies with different individuals from none at all to a great deal. In getting at present methods of entering occu-

pations we are, therefore, interested in knowing something about the information at hand when the choice of work is under consideration before school days are over; something about the first jobs and the influences determining their selection; something about the shifting and the reasons for it; and something about the forces at work which result in one of the jobs finally becoming the permanent occupation.

Let us consider first that large group of young workers composed of those who leave school before they pass beyond seventeen years of age. It has already been seen that by this time about two thirds are engaged in wage-earning employment. The great majority of these have no more than an eighth grade education. Indeed a large percentage have not gone beyond the sixth grade.

Character of information upon which choices of occupations are based. What do these boys and girls know about the opportunities and requirements of occupations? Those who live in the country know by experience and by observation quite intimately about the particular kind of farming carried on on the home farm. This may be general farming, or it may be dairying or fruit raising or any one of a dozen other kinds of specialized farming. The work may be done in a businesslike manner according to the principles of scientific agriculture, or it may be conducted in a slipshod manner according to methods inherited from the previous generation. The farm may be well equipped with modern labor-saving machinery the operation of which requires considerable mechanical ability, or it may be poorly equipped and call for less

mechanical ability and more hard physical labor. In addition, the farm boy and girl have a less intimate knowledge of other types of farming carried on in their community, unless, perchance, the entire community be engaged in the same kind of agricultural activity. Moreover, the average country boy has picked up, by reading and by visits to the neighboring town or city, bits of information or misinformation concerning a few occupations that are carried on in the cities. The information about occupations that comes to the country home has increased very much since the coming of rural mail delivery, the automobile, and the radio. It will continue to increase in quantity. Whether it improves in quality and in value as a means of aiding in choice of occupations will depend upon whether a systematic effort is made to this end by some agency interested in vocational guidance. In general, such information as comes now is likely to cast a glamour around city occupations as compared with those of the country.

Boys and girls who live in villages and small towns, as a rule, have less valuable information concerning any one occupation than is acquired by the average country youth concerning farming. However, they do pick up, usually, somewhat more complete and reliable information than the country youth concerning several small-town occupations because of more frequent contacts with them. On the other hand, most small-town youth have extremely meager knowledge of occupations in the large cities unless the same occupations are represented in the towns in which they live.

In larger cities the daily contacts of life afford boys and girls, while still in school, opportunities to pick up bits of information concerning a considerable number of occupations. Summer employment and after-school employment add more detailed knowledge concerning a very limited number of occupations in the case of many pupils. Some school systems, in recent years, have undertaken to provide pupils with occupational information with the definite purpose of aiding them in deciding what to do when they leave school. But even in the larger cities the great majority of those who enter employment before reaching the age of seventeen are still obliged to do so with pitifully meager information concerning the possibilities and demands of the occupations which are open to them.

Nor do these youth who face employment for the first time, whether they live in the country, in the village, or in the city, possess any more adequate information concerning their own abilities, special aptitudes, temperaments, and personality traits.

Obtaining the first job. When the question of actually beginning employment faces these youths, most of them find their first jobs, and often subsequent jobs, by going from place to place where they think young help is needed and making personal application. They learn of these places through friends, through newspaper advertisements, through cards displayed in windows, and in other ways. In most cities certain firms are known as employers of young workers in considerable numbers, and boys and girls naturally drift to these places when seeking employment. As yet, schools and other social agencies of the community

play a very minor part in this matter of vital importance to youth and to society as a whole. The following table from Burdge's [1] study of the 245,000 sixteen-, seventeen-, and eighteen-year-old employed boys of New York State shows how this large group obtained employment:

How 245,000 Boys Obtained Employment

Groups	Friend	Advertisement	School	Church	Emp. Bur.	Applied
Greater New York	27.9%	5.7%	1.8%	0.2%	1.7%	62.7%
Cities over 25,000	22.6%	0.2%	0.7%	0.1%	0.3%	76.1%
Cities under 25,000	24.9%	0.3%	0.3%	0.1%	0.2%	74.2%
Villages over 5000	27.3%	0.1%	0.2%	—	0.4%	72.0%

Lewis [2] in his study of 800 Iowa boys found that 85 per cent of the jobs they had had were found by the boys' "hawking" for them. He adds: "Apparently the teacher does not attempt to assist these boys in securing work. Nor are their friends, relatives, and parents of very much greater assistance. The majority of boys find work for themselves. It seems not to be considered the business of any social agency, other than the public school, accurately to inform such boys concerning the occupations open to them. No literature is handed them concerning desirable vocations, and apparently no advice is offered them regarding unskilled, semi-skilled, or highly skilled employments. They are not told about the 'blind-alley' jobs. No

[1] Burdge, Howard G. — *Our Boys*, p. 194.

[2] Lewis, E. E. — "Work, Wages and Schooling of 800 Iowa Boys," Bloomfield's *Readings in Vocational Guidance*, p. 242.

one looks after them systematically, following them from the door of the schoolroom into the jobs which necessity or choice causes them to accept. They find their own jobs and take the jobs that they can find quickly."

Mrs. Reed,[1] speaking from extensive experience in the field of junior employment work, in discussing the method of securing the first position, says: "Turning to the employee side of the problem, we find that personal application, suggestions from friends, and newspaper advertising are the most helpful employment agencies. Signs in the windows rank higher as an efficiently functioning employment service for boys and girls than does the assistance of the public schools."

Because it is the first thing available is, according to several authorities, the most common reason for the choice by these younger workers of their first job. Other writers place wages to be received as the dominating influence, in the case of both the first and early succeeding jobs. A great deal depends upon business conditions as to which influence is the stronger. If times are bad and it is difficult to obtain employment at all, the first job available is likely to be grabbed. If times are good and employment plentiful, the wage influence tends to become dominant. Also, wages are more likely to influence the choice of later jobs than of the first one. Sometimes opportunity to learn a trade or chance for advancement is the deciding influence, but not often. Occasionally nearness to home, clean work, easy work, short hours, or the fact that "a young friend works there" determines the choice, though

[1] Reed, Anna Y. — *Junior Wage Earners*, p. 27.

some of these influences are more weighty with girls than with boys.

According to Mrs. Reed,[1] "usually juvenile, and frequently junior, applicants take the first job offered without regard to the industry, the process within the industry, or the employer, and without any consideration of what it has to offer him or his fitness for its needs."

Shifting from job to job. After employment begins changes from one job to another are frequent with most young workers. Lewis reported that the average boy included in his study passed through three jobs in two years. Burdge summarizes this matter in his study with the statement: "Regardless of the size of the community about 23 per cent of the boys had had one job; 26 per cent, two jobs; 23 per cent, three jobs; 12 per cent, four jobs; and 6 per cent, five jobs." It should be remembered that Burdge is speaking of all the employed boys sixteen, seventeen, and eighteen years of age in New York State. Fifty per cent of the boys he studied had held their jobs less than 7.5 months.

The amount of shifting during the early years of employment appears to be greater among those who are subnormal mentally. Miss Carpenter,[2] in a study of the occupations of subnormal girls after leaving school in Detroit, reports that 84 per cent of the jobs held by 181 of these girls were held for six months or less. Only fourteen of the girls out of 137 who had been out of school more than one year were still in their first jobs, with a record of one year or more of employment.

[1] Reed, Anna Y. — *Junior Wage Earners*, p. 27.

[2] Carpenter, Mary C. — *The Occupations of 207 Subnormal Girls.*

Miss Carpenter gives the work record of one girl who left school at sixteen years of age while still in the fifth grade and with a mental age of 11.4 years, who, in three years of work, had held twenty-five jobs in eight quite distinct kinds of employment. " This girl has a pleasing manner which makes it easy for her to get a job, but her instability makes the retaining of it impossible." Miss Carpenter cites, also, the case of another girl, mental age 8.4 years, who always chose department-store work because she liked a crowd, and whose record was fifteen jobs in eight weeks of actual employment.

Reasons for shifting. When the reasons why these young workers change jobs is considered, it is found, as indicated above, that the wage to be received assumes greater importance than in the case of the first jobs. Then, too, a somewhat larger number take account of opportunity for advancement after they have had a few months of experience; but the dominant influence is wages. Lewis points out that the one striking note through all the reasons for change given by the boys he studied was their desire for better wages. He adds, " They seem to think more of an increase in salary than they do of an advancement in skill. In their minds the boy who is getting the best wages is the most successful boy."

According to Burdge it is characteristic of boys of these ages, regardless of environment, to change from job to job on the slightest provocation. He says further: " The personal interviews held by inspectors of this bureau with many thousands of these boys indicate that boys hold their jobs for comparatively short periods of time and change from job to job for all sorts

of trivial reasons. Boys were found who had left good jobs with excellent opportunity for training and advancement and jobs which they really liked to accept other positions without opportunity for training or advancement for a very slight temporary increase in wages."

The writer could give many illustrations of the trivial character of the reasons for changing jobs on the part of these young workers, but two will suffice.

Some years ago when coöperative high school courses were conducted by several of the high schools of New York City, a boy was placed in a shop where he could learn the machinist's trade. One day he found himself working near a boy of his own age who was doing piecework. The pieceworker was earning nearly twice as much as the apprentice. The latter would have given up his opportunity to learn a highly skilled trade and gone immediately to piecework, because of the higher wages, if it had not been for the school coördinator who convinced him of the folly of such a step.

Another boy in New York City working in a shop under the coöperative plan was on the point of giving up his opportunity to learn a skilled trade because, as he expressed it, " the foreman has it in for me." When the school coördinator discovered the situation he easily straightened out the difficulty.

Miss Carpenter cites the case of a subnormal girl who held fifteen different jobs in three years. " This girl was always reported as a good worker and could go back to any of the places she had been employed. She stated that her mother took all the money she

earned, so there was no incentive for increasing her wages by lengthening the time of employment." Anyway, she " just liked to change." In both of the cases cited earlier from Miss Carpenter's study, the reason for changing was nearly always " work unsatisfactory to the employer."

The inference must not be drawn from what has been said concerning frequent changes of jobs by young workers and the trivial reasons for them, that such changes are always undesirable, or even usually so. It is quite as true that many young workers stay in jobs longer than they should. In the one case it is inertia and fear of change, in the other, desire for more wages or a whim or caprice or pique of the moment. The significant thing is that in neither case is the decision usually based upon anything that even approaches a careful consideration of the worker's best interests in the long run.

Conditions among those who prolong their schooling. Of those who postpone regular wage earning until they graduate from high school or later, a larger proportion give the subject of their first job serious consideration. Also, they are more likely to weigh, at least in a superficial manner, the advantages and disadvantages of a proposed change of occupation.

Nevertheless a large percentage of high school youths and a considerable percentage of college students come to the point of leaving school at graduation with no definite choice of an occupation. Harris [1] found in 1923 that 36.8 per cent of the 801 freshmen he studied

[1] Harris, W. L. — "The Vocational Guidance Problem in the University of Michigan." An unpublished study.

in the College of Literature, Science and the Arts, University of Michigan, entered college without a choice of occupation. He found, also, that nearly 10 per cent of the seniors began their last semester without having reached a decision in this important matter. Of those who come to the completion of high school or college with such a choice, many have made it as a result of the influence of parents or friends whose knowledge of occupational requirements and opportunities is very limited, or because of some chance experience. Harris came to the conclusion that not more than half of the college freshmen who, in his investigation, came to college with a definite choice of occupation had made this choice on the basis of adequate information. And of those who go out with a definite choice, many do not at once find employment along the line of their interests and drift into something else, while others do not find the chosen work satisfactory or do not prove satisfactory to their employers and soon change. And the process of shifting goes on until a fair degree of satisfaction is found in the last employment or until family or other conditions make it easier to bear the ills of the present occupation than to risk another change. Often a business depression forces a man to change, sometimes resulting disastrously for him and sometimes to his advantage, after he has become established in an occupation. On the other hand, many a man who was considering a change of occupation to something that promised greater satisfaction and success has been deterred by a business depression.

Summary. We see, then, that at present, with 1,500,000 young people of immensely varied qualifi-

cations making the transfer each year from school to wage-earning employments, entering an occupation is largely a matter of chance. In the case of those who leave school at an early age, with extremely meager knowledge of the opportunities and requirements of occupations which they might enter, a first job is secured usually through friends or through personal hustling for it. The influence which determines the choice is usually that this is the first job to be had or that it pays best. Opportunities for advancement are given scant consideration. Generally little effort is made to find out in advance whether the proposed employment is suited to the abilities, special aptitudes, or personality of the prospective worker. The employer, or his agent, to be sure, spends a few minutes and asks a few questions in an effort to find out whether the young applicant can do the work immediately expected of him, but usually makes his decision with a very superficial knowledge both of the applicant's qualifications and of the job's requirements. Often the most prominent thought in his mind as he hurries to other work is: "Well, I'll try this one. If he doesn't fit, I'll have to try another."

With employment begun there begins a sort of shaking down process which reveals misfits. If the misfit is not too serious, nothing may be said about it for weeks by employer or young worker, in the hope that time will remedy the difficulty. If the misfit is serious, and often when it is not, a change takes place quickly and a new job is found in much the same manner as the first one. Often the lure of higher wages attracts the young worker away from work that suits him admi-

rably into a job that is unsuited to him and offers little chance for advancement. The shifting process may go on for years, but gradually experience and the law of inertia bring about a decision in the young worker's mind to stay where he is and make the best of the occupation he happens to be in. Some are fortunate in having found work that brings them satisfaction and calls forth the best that is in them; others are unfortunate in having, as they think, to spend their lives doing what they dislike. Among those who continue their schooling one or two or more years beyond the compulsory education period, more consideration is given to the matter; but even with high school graduates and college students, chance plays a far more important part than scientific method in choosing and entering occupations.

QUESTIONS AND EXERCISES

1. According to the United States census for 1920, 91 per cent of the males 20 to 24 years of age were then engaged in wage-earning occupations. How do you account for the other 9 per cent?

2. Compare the average number of male wage-earners 18 and 19 years of age with the average number 20 to 24 years of age. Do the same for females and account for the difference in results for the two sexes.

3. Give reasons why a considerable number of women begin wage-earning after 24 years of age.

4. Take the most recent age-grade table of some city school system, use the number in the third, fourth, and fifth grades divided by three as 100 per cent, and find what per cent of this number are in each of the grades six to twelve. Compare this with the table on page 3 and give probable reasons for the differences.

5. How does the general intelligence of those who enter employment without completing the ninth grade compare with that of those who graduate from high school? Submit evidence from published results of intelligence tests.

6. Cite an illustration of what appears to be marked differences between two individuals in aptitude for some specific activity.

7. Cite two illustrations of physical handicaps which limit occupational possibilities.

8. Cite illustrations of occupations the successful pursuit of which calls for the following: youth, maturity; little education, much education; little general intelligence, high degree of general intelligence; two different kinds of aptitude; physical strength, deftness; interest in people, interest in things.

9. Compare the more obvious requirements of a telegraph messenger boy with those of a life-insurance salesman; of a salesgirl in a ten-cent store with those of a salesgirl in the dress department of a high-class department store.

10. Ask ten of your acquaintances who are wage earners how they obtained their first jobs and compare the results with Burdge's results. Give reasons for differences in results.

11. Is it to be expected that "first thing available" and "wages to be received" will be more important influences with those leaving junior high school than with those leaving senior high school in determining the first jobs obtained? Give reasons for your answer.

12. Give the work records for the first four years of four or five of your high school classmates, selected at random, who entered employment without finishing high school or soon after graduating from it. Include names of jobs held and approximate length of time each was held, if possible; also, reasons for changing.

13. How do you account for the fact that the varied experiences of some individuals in shifting from occupation to occupation seem to have been good preparation for what they are now doing, while with others the reverse is true?

14. Present additional evidence supporting or controverting Harris' conclusions that approximately two thirds of literary college freshmen enter college with fairly definite choices of occupations, and only about one half of these have made their choices upon the basis of adequate information.

15. In what respects is the average senior just graduating from the literary college better situated than the average entering freshman in the matter of choosing a suitable occupation?

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CHAPTER II

WASTE INVOLVED IN PRESENT METHODS OF ENTERING OCCUPATIONS

It is obvious that the methods of entering occupations described in the last chapter are wasteful. The extent and character of this waste deserve consideration.

Economic loss to the individual through changing occupations. Usually there is economic loss to the young worker in shifting about from one kind of work to another. He takes longer to get his stride and to reach his maximum earning power in the occupation which he finally follows, than if he had entered this occupation near the beginning of his wage-earning career. Often he spends years of time without income and a large amount of money in preparation for a profession for which he is unsuited and which finally he is obliged to abandon. An illustration is found in the case of a graduate of the University of Michigan Law School. When this young man graduated from high school his father said to him, " Now, son, you go to my alma mater and prepare for the law. When you graduate I shall take you into my office and make you junior member of the firm." The son obediently went to his father's alma mater, completed creditably the combined literary and law courses, finding time also to

indulge to some extent his interest in music, returned to his father's office and demonstrated within a few months his complete unfitness for the legal profession. The young man, with the approval of his father, soon abandoned law and went to New York City, where he is now succeeding in a musical career, both as a performer and a composer. This young man might be several years farther along in his musical career today if he had decided upon that career and begun preparation for it when he began to prepare for law.

The extent to which young people spend years in preparation for occupations which are later abandoned is greater than generally is realized. Yoakum [1] calls attention to statistical studies made at the larger engineering colleges which show that from sixty to sixty-five per cent of the graduates are to be found in other occupations than engineering five years after graduation.

Factors influencing extent of loss. It may be argued that experience in and preparation for other kinds of work carry over into one's final occupation and that, on this account, there is really no serious loss from changing. Put baldly this would mean, for example, that a youth who works as a carpenter for a couple of years and then decides to become a machinist would learn the machinist's trade enough more quickly or that he would become enough more proficient in it because of his carpenter's experience to offset his late start as a machinist. Or, to revert to the previous illustration, it would mean that his legal training and experience would be of

[1] Yoakum, C. S. — "Experimental Psychology in Personnel Problems," *Bulletin of the Taylor Society*, Vol. X, No. 3, 1925.

sufficient value to the young musician to compensate for his delay of several years in getting started in music as a profession. As a matter of fact the young carpenter-machinist would spend approximately two years longer in the apprentice or helper stage, with corresponding wages, than if he had started in the machinist's trade first. His knowledge of carpentry probably would have some value to him as a machinist, but not nearly enough to compensate for the loss of time in starting his final trade. And it would be hard to convince the lawyer-musician that his legal training and experience were not a waste of time and money as far as his musical career is concerned. Certain habits and ideals, methods of procedure, and attitudes of mind do carry over from an earlier occupation into a later one, to be sure. It is quite possible that personal contacts made in the earlier occupation will prove valuable in the later one. On the other hand, it is entirely possible that quite the reverse will be true of personal contacts, and also that some of the habits, ideals, methods of procedure, and attitudes of mind developed in an occupation that was disliked will prove more of a handicap than a help in the new occupation. It appears that the degree of economic waste to the individual varies inversely as the number of common elements found in the two occupations. That is, if the new occupation is very similar to the old, or in other words, if the two have many common elements, then the carry-over will be great and the economic loss to the individual will be correspondingly small. If the new occupation is very different from the old, or if there are few common elements between them, then the carry-over will be slight and the

economic loss to the individual correspondingly large. Obviously the total amount of loss is greater when the change is made between two occupations requiring extensive preparation than when it is made between two that require little preparation.

It should be understood, however, that the above discussion is concerned only with economic waste. It is true that certain cultural values accrue to the individual from experience in, and especially from preparation for, an occupation, even though that occupation be deserted later for another.

Economic loss to the employer. Nor is the waste involved in present methods of entering occupations limited to the wage earners. Employers are obliged to bear a large share of it, at least for a time. When an electrician's apprentice decides to become an automobile mechanic, when a telephone operator decides to become a department store salesgirl, and even when an automatic machine operator leaves his machine to become a toolmaker's apprentice, a new worker must be developed to the point of proficiency attained by the one who left before the employer ceases to lose as a result of the change.

The extent of the employer's loss varies greatly, depending upon the skill and knowledge required in the work, the time the young worker has been employed, his natural aptitude for the work, and the like. The quality and quantity of the available supply of labor for the position left vacant also enter into the question. The real measure of the employer's loss is the cost of bringing a new worker to the degree of proficiency attained by the one who left. This includes the cost

of the time spent by the employing officer in interviewing applicants, looking up their records, and selecting a worker from among them. It may include advertising in the daily press. It includes the value of a foreman's time in showing the new worker what is to be done and teaching him how to do it. It includes more damage to equipment, larger waste of materials, greater accident hazard, and lower production during the learning, or breaking-in, period.

The costs of labor turnover, as what we have been discussing is called, have been estimated by different writers on the subject. The estimates deal chiefly with factory labor and range from about fifty to two hundred dollars per man, depending upon the kind of work done. The estimate for one street railway company was $370.43 per man for trainmen in the service one year or less. A large telephone company estimates that the loss of an experienced telephone operator costs them $75.00.

The total annual cost of labor turnover to the business and industries of the United States is, of course, enormous. It is not at all uncommon for an industrial establishment to have a turnover of 100 per cent or more in a year; that is, to be obliged to take on within the period of a year as many new workers as the average number of employees during that year. Slichter [1] cites case after case where labor turnover was higher than 200 per cent, in some instances going as high as 400 per cent. The United States Commission on Industrial Relations in a survey of 105 factories and mines reported the following labor turnover, covering chiefly the years 1912–1914:

[1] Slichter, Sumner Huber. — *The Turnover of Factory Labor.*

Size of Turnover	Number of Establishments with Turnover of Respective Sizes	Average of Maximum and Minimum Forces	Number of Terminations of Employment
200% or over	11	12,788	30,014
100% to 200%	30	69,797	105,857
80% to 100%	9	24,913	22,416
60% to 80%	21	60,021	41,814
40% to 60%	18	38,756	19,523
20% to 40%	11	19,029	6,219
Below 20%	5	734	99

A large telephone company employing 2600 girls as operators in 1920 was obliged to take on and train 2600 new girls in order to keep the force up to normal. In 1925, with a force increased to 3500 girls, the turnover was 55 per cent. The great majority of the girls who leave the company, go into other and quite different lines of work where their new employers have to spend money in making them proficient, though a limited amount of the training given to telephone operators carries over into such occupations as department store selling and office work.

To be sure, a great deal of labor turnover does not involve changes in occupations but merely changes in places of employment, the work being practically the same in the old and new positions. This, of course, is expensive to employers but it is not the thing with which this chapter is concerned. Changes in *occupations* are much more expensive than mere changes of employers, both to the employers and to the workers themselves. Moreover, they are much more common with younger than with older workers. The situation

is, then, that the labor turnover is much greater among young workers than among adults. In a metal-working plant reported upon by Slichter,[1] labor turnover was, in 1916, 104.8 per cent for boys, 84.3 per cent for girls, and 68.8 per cent for the entire plant. Also, a larger per cent of turnover among young employees is of this more expensive kind from one occupation to another. Yoakum [2] reports that in a certain organization which takes on annually three to five hundred young men, and almost as many young women, at the age of sixteen, the turnover of individuals from sixteen to twenty years of age is about 400 per cent, while beyond that age it drops to 40 per cent.

Costs finally borne by society. It must not be inferred, however, that employers bear permanently all the costs of these wasteful methods of entering occupations. In the main, the costs are promptly passed on to society in the form of more expensive products or service. There are " seconds " to be disposed of, and often worse than seconds, as well as first-class products; and the number of seconds is increased by heavy labor turnover. Whether these inferior products are sold for less than cost of production or whether they are sent to the scrap heap, the difference between the cost of production and what is received for them usually is added to the selling price of the first-class products. And the public pays. However, an individual producer cannot go much farther than the mass of producers in the same line in adding such charges, else he would be unable to

[1] Slichter, S. H. — *The Turnover of Factory Labor*, p. 77.

[2] Yoakum, C. S. — " Experimental Psychology in Personnel Problems," *Bulletin of the Taylor Society*, Vol. X, No. 3, 1925.

dispose of his product. This is but another way of saying that abnormal costs of production from whatever cause must be paid for out of profits or capital or both.

It should be added that labor turnover among adult workers, with its economic loss to society, is undoubtedly much heavier because the habit of shifting from job to job is developed in the early months of employment.

Loss through staying in unsuitable occupations. Serious as is the financial waste due to wage earners shifting from one occupation to another, it is trivial in comparison with that resulting when they stay in occupations for which they are unsuited. And many spend their entire working lives in such occupations. Their work is good enough in quality and quantity to "get by," though it is below that of the fortunate ones who find in the same work just the proper outlet for their aptitudes and interests. The number who spend from a few months to several years in work for which they are unsuited must be enormous, though we have no means of estimating it, and few scientific studies throw any light on the subject. A few years ago the writer observed two women operating adjacent power sewing machines in a shirt factory in New York City. Both were performing the same operation, sewing in sleeves, and both were paid by the piece. The superintendent said that the one on the right, an Italian woman, was earning nearly twice as much per week as the one on the left, an American woman, and doing it with much less effort and nervous strain. The superintendent of an olive-packing plant told the writer that if he were to

take on twenty-five new girls to pack stuffed olives in bottles, probably ten of the number would be unable to develop sufficient speed to earn a wage that would justify them in continuing the work or the employer in keeping them. It is possible that at some other kind of work the American woman would have surpassed the Italian, and that the ten who failed as olive packers, usually after several weeks of trial, would have surpassed those who succeeded. And we have no evidence that some of those who succeeded as olive packers might not have done much better at something else.

Illustrations of this sort might be multiplied indefinitely. Link [1] cites many cases of shell inspectors, gun-parts assemblers, clerks, machine operators, and others who were employed for considerable lengths of time before it was discovered that they were unsuited to the work they were doing.

" Many a good farmer has been spoiled to make a poor preacher," and many a good mechanic to make a poor engineer. And the poor preacher and poor engineer are receiving meager returns from their work, while society is receiving mediocre service from two men who could serve it and themselves far better as farmer and mechanic.

Dr. Donald Laird, professor of psychology in Colgate University, was quoted in the daily press recently as saying in a public address that: " The four-hour working day would be possible at any time without disturbing industry if the men were placed in jobs for which they are best fitted." In support of this statement he cited the case of one coal miner loading twelve times

[1] Link, Henry C. — *Employment Psychology.*

as much coal as another, and another case of one salesman selling three hundred times as much goods as another. Possibly Laird overstates the case, but it is clear to anyone who gives the matter even superficial consideration that there is incalculable economic waste in this country and in every other, through individuals failing to find suitable outlets for their native capacities and special aptitudes when such outlets are really near at hand.

Effect of unsuitable occupations upon health of workers. Another aspect of the economic waste involved in present methods of entering occupations appears in the effects of unsuitable occupations upon the health of workers. This is very patent in case of the tubercular whose work is done indoors where the air is close and filled with particles of dust. Either his life is shortened and, therefore, his productive period; or he is obliged to give up work for months or even years while regaining his health. In either case he is, during his illness, not only a nonproducer but a drain upon the production of others. Formerly an economic asset, he has become an economic liability.

Sometimes it is a weak heart that gives way under a heavier strain than should have been put upon it, or delicate eyesight is injured by work that is finer or more prolonged than should have been undertaken. More often the nervous system is shattered by efforts to maintain a speed of production beyond its capacity, or to adjust itself to a disagreeable environment. The American woman in the shirt factory, already mentioned, appeared conscious of her inferiority to her Italian neighbor and apparently was striving des-

perately, with many unnecessary motions, to overcome it. Her nervous system was under a very heavy strain. It seems probable, also, that the one whose work is not suited to him is more often the cause of accidents resulting in injuries to himself or others and consequent economic loss.

Effect upon individual's value as a social unit. If the economic loss involved were all, the case against present methods of entering occupations would be a strong one. It is made still stronger, however, when the social waste is considered also. Neither the individual who is failing in his work because he is unsuited to it nor the one who is getting on but dislikes his occupation and goes through life feeling that he has missed his calling is as valuable a member of society as the one who finds that his work is interesting and satisfying and suited to his ability. It is from those who have made repeated failures that the group of social derelicts, known as the unemployables, is recruited in our large cities. Each failure in the experience of a young worker increases the probability of another. Even failure in one occupation is often demoralizing, especially if it has been preceded by a long period of preparation. A graduate in law from a well-known university obtained employment immediately after graduation in a large law office in Chicago. Within a few weeks he married the girl who had worn his engagement ring throughout his law school days. Naturally buoyant, companionable, and kindly, he was a good neighbor and a good citizen. At the end of the first year his employers discharged him and advised him to enter some other occupation, since, in their judgment, he never would succeed

as a lawyer. Unwilling to give up after so long a period of preparation, he obtained employment in another law office, only to repeat his previous experience. Badly in need of money, he was willing to do any kind of work that paid well. He became a lathe hand on the night shift in a manufacturing plant. During these experiences certain of his characteristics changed decidedly. He became despondent, morose, sullen, antisocial. Stinging under the sense of failure, he moved to another part of the city where he could more easily avoid his old friends. Only after several years which brought him a fair degree of success along mechanical lines did he recover, and then not fully, his former disposition and become again a really wholesome social unit in his community.

Those who go through life doing, with a fair degree of success, work that is distasteful and unsuited to them are constantly subject to a friction that irritates and tends to make them dissatisfied, disgruntled members of society. The load seems to pull harder and causes greater weariness because of the friction. Some find relief and satisfaction in an avocation which they carry on during leisure hours. More turn to recreation for satisfaction and come to look upon their work merely as a means of earning money enough to pay for a good time outside of working hours. Many become grouchy and faultfinding in their places of employment and in their homes. In the industrial field these are ready fuel for the fires of industrial unrest and disturbance. In business occupations and the professions they are likely to be centers of discontent and pessimism. Wherever they are found, they are far more often social liabilities

than are those who have "found their work." The English novelist, Hutchinson, gives a good illustration of this in the character of the heroine's father in "This Freedom."

Loss to society through failure to discover potential genius. Again, society often suffers great loss from present methods of entering occupations through failure to discover potential genius, or even potential capacity. This idea is given poetic expression in Gray's *Elegy in a Country Churchyard:*

"Full many a gem of purest ray serene
The dark unfathomed caves of ocean bear.
Full many a flower is born to blush unseen
And waste its sweetness on the desert air."

"Some village Hampden that, with dauntless breast,
The little tyrant of his fields withstood,
Some mute inglorious Milton here may rest,
Some Cromwell guiltless of his country's blood."

It is a well-known fact that the special aptitudes of some of the world's greatest artists have been discovered by chance. This was true of Caruso, the great tenor, for example. How great would have been the loss to this country and to the world if Lorado Taft, by an unfortunate chance, had devoted his life to law instead of to sculpture; or James Whitcomb Riley had taken up engineering instead of being a poet; or Thomas A. Edison had become a teacher instead of an electrical inventor! And yet our present haphazard methods of entering occupations must leave other Tafts and Rileys and Edisons undiscovered, filling relatively unimportant positions in the world's work and failing to make the splendid contributions of which they are capable to the

world's art or literature or mechanical progress. And what a multitude of individuals of lesser capacity there must be who are contributing to human happiness and progress only a fraction of what they might contribute in other occupations which would call forth the best they have in them! Society's loss through failure to discover potential genius and capacity is inestimable.

Summary. Present methods of entering occupations contribute to labor turnover which is enormously wasteful in an economic sense to the individual, to the employer, and to society. Likewise there is heavy economic loss through individuals working for long periods, often throughout their lives, at occupations for which they are not suited; and through the effects of such work upon health. The same situation tends to make the individual a less valuable social unit in his community, if not actually a social liability. Finally society must suffer incalculable loss through failure to discover potential genius.

QUESTIONS AND EXERCISES

1. Roy Johnson served two years of a four-year apprenticeship in the printer's trade, his wages being 21 cents per hour the first year and 24 cents per hour the second year. He then became a machinist's apprentice, serving four years at the following wages: first year, 21 cents; second year, 24 cents; third year, 27 cents; fourth year, 30 cents. How much more wages would he have received during the six years if he had become a machinist's apprentice at the beginning of the period, assuming that he earns 75 cents per hour as a machinist after completing his apprenticeship? Base your calculations on a 54-hour week and a 48-week year.

2. Tom McKnight, after graduating from college at 21 years of age, took a three-year law course and was admitted to the bar.

After one year's work in a law office at $1500 salary he decided that he was not suited to law and entered a well-known medical school. He graduated in three years, spent two years as an interne in a hospital, and then began the practice of medicine. His earnings were, first year, $1500; second year, $2000; third year, $2500; fourth year, $3000. Suppose that he had entered the medical school immediately after graduating from college and his history for the next nine years had been the same as it was after he did enter this school. Assume that his expenses in the medical school were the same as in the law school, $900 the first year, $1000 the second, and $1100 the third. How much more would he have been ahead financially by the time he was thirty years old? Suppose he retires at 65, his earnings running approximately $8000 per year for the last ten years. What difference in earnings for his entire productive period would his early mistake in choice of occupation have cost him, assuming that his law course did not increase his efficiency as a physician?

3. The previous exercise is based upon the assumption that preparation for the legal profession does not increase one's earnings as a physician. Does this assumption appeal to you as generally sound? If so, can you think of possible exceptions?

4. In 1926 the telephone company in a large city had a daily average of 3570 switchboard operators in its employ. The labor turnover for the year among this force was 70.3 per cent. The reasons given for separations were:

Marriage	3.9%
Home duties	9.5%
Return to school	2.7%
"Leaving city"	11.5%
Disability	8.2%
Employment Reasons	12.6%
Miscellaneous	4.5%
Reasons not obtained	3.4%
Dismissals	9.1%
Transfers, pensions, and deaths	4.9%
Total	70.3%

It is estimated that the average cost to the company for selecting and training an operator, before she is assigned to a switchboard, is $75.

a. Compute the cost of labor turnover among the switchboard operators of this company for the year. (Include only cost of selecting and training.)

b. Compute the cost of selecting and training those whose separations were due to disability and dismissals.

c. Is it probable that many who left voluntarily did so because they were unsuited, in some way, to telephone operating? In which of the above groups would they be most numerous?

d. What employment opportunities are there in a large city, outside of the telephone company, in which the girls would use the training received with the telephone company?

e. How is the labor turnover of this force affected by the facts (1) that the company selects carefully from a large list of applicants those who are accepted for training and (2) gives all who are accepted four weeks of training, during which there is an average loss of 12 per cent, before assignment to the switchboard?

5. Is it fair to conclude that the public pays more for the products and service which it buys because many workers are unsuited to the work in which they are engaged? Explain and illustrate your answer.

6. Is it not probable that some people are more useful members of society because they have not found occupations for which they are well suited? Failing to find satisfaction in their work, or even disliking it, do not some enter with more interest and zest into community service activities? If so, is this common enough to compensate for the cases where failure to find a suitable occupation results in social loss?

7. Some maintain that genius leaps over all obstacles and that one who possesses it cannot be deflected from a successful career by the circumstances of birth or environment. Does this view appear to be supported by the facts of history? Is there

evidence of undiscovered genius and, on a lower level, special aptitude, which fail to make their possible contributions to society?

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CHAPTER III

SOCIETY'S RESPONSIBILITY IN THE TRANSFER FROM SCHOOL TO OCCUPATION

Has society any responsibility in the matter? Has organized society any responsibility in this unfortunate situation, if indeed it be unfortunate? Is it not, after all, a matter in which the ancient law of the jungle, the law of everyone for himself and the survival of the fittest, must operate? Is it not better for society to keep its hands off, as it has done in the past, to let the individual stumble as best he may through the maze that confronts him, on the theory that he who has anything worth while in him will find a way to demonstrate it? In fact, is there not danger of interfering unjustifiably with individual liberty if society undertakes to remedy or improve the situation? And are we not in danger of destroying individual initiative by too much paternalism in this matter?

A question of conservation of human resources. In the first place society always has assumed responsibility for some sort of protection of its young. At one time this amounted only to protection from wild animals and other destructive forces of nature. Today, protection is provided against communicable diseases, against exploitation by unscrupulous employers, against the consequences of illiteracy, and so on through a long

list. It is only a step farther, and that a very natural one, to provide such protection as is possible against the misfortunes and evils resulting from unwise choices of occupations.

In the second place society has always considered itself justified in taking whatever steps were necessary to protect itself. Provision for protection of its young has had self-protection, regard for its own future, as its ultimate purpose. If society is justified in assuming responsibility for providing a fire department, a water department, a police department, a school system, and all the rest of the complicated mechanism of government in a modern city, for its own protection and welfare, surely it is justified in taking responsibility for protecting itself as far as possible against the enormous waste involved in present methods of entering occupations.

The question under consideration really is part of that larger problem of conservation which has engaged so much attention in recent years. Conservation of the native capacity of her youth, their special aptitudes and interests, and the results of years of education provided for them at public expense, is what is involved. Here is incalculable potential wealth, both economic and social. For its own sake as well as for the sake of its youth, society cannot afford to neglect so important a phase of conservation.

The problem of vocational guidance. Here, then, is a social problem of large proportions, the problem of reducing the enormous waste which now takes place in the transfer each year of nearly a million and a half of youth from school to wage-earning occupations. This

is the problem of vocational guidance. What is involved in it?

Friends of the movement have phrased differently their conception of what is involved in a comprehensive program of vocational guidance, though agreeing in the main on the most essential items. In the judgment of the writer such a program must include the following:

1. Aiding those who are faced with the problem of choosing an occupation to obtain reliable, significant, and adequate information upon which to base their choice.

2. Providing them, as far as practicable, with suitable try-out experiences in order to test their fitness for occupations in which they have a special interest.

3. Helping them to evaluate and interpret information and try-out experiences in relation to their personal qualities and limitations in making the choice.

4. Aiding them in planning and making their preparation for the occupations chosen, and in planning their further training after employment begins.

5. Assisting them to enter chosen occupations advantageously.

6. Giving help to those who need it in working out necessary or desirable occupational readjustments after employment begins.

Viewed in this way, vocational guidance does not interfere with individual liberty any more than education does. On the other hand it enlarges the liberty of the individual by opening up to him a larger range of possible occupations and providing him with more complete and reliable information upon which to base his choice. Nor does it destroy individual initiative in the

matter of entering occupations. Rather does it seek to develop initiative, as will appear more fully later, in obtaining and weighing information concerning occupations in advance instead of jumping into one of them without consideration and finding out about it later.

Society's logical agent in this work. Clearly, the best social agency to organize and carry through a program of this character in any community is the public school system. Nearly all the children of the average community attend the public schools. They are in attendance at the age of adolescence when a boy begins to think more seriously of the work he would like to do, and when the majority, as their school days draw to a close, are approaching the time when they must make some decision as to the first job at least. The school system has, or should have, more complete and reliable information concerning the qualities and characteristics of the boys and girls of the community than any other agency. If it does not have all the needed information of this kind, at least it is in better position to obtain such as can be obtained — health and scholarship records, general intelligence ratings, social and moral qualities possessed by pupils, and the like. The school system, more than any other agency, either has the organization or can readily develop one required to gather the necessary information concerning occupations. This fact has been demonstrated in numerous cities. The public has confidence in its schools and in their desire to render a genuinely fair-minded, disinterested service. What is more, the public has been placing upon the schools in recent years more and more responsibility for the welfare of its children; witness

health inspection, physical education, and vocational education.

Vocational guidance an integral part of education. Finally, vocational guidance is an educational service and as such should be considered an integral part of the educational program carried on by the recognized educational agency of the community. This point was emphasized by the writer some years ago.[1] Helping the youth to obtain reliable and significant information upon which to base a choice of occupation, aiding him to find a suitable opportunity to begin work in the occupation of his choice, and giving him additional assistance as needed during the period of adjustment and further training after employment begins are just as truly educational service as teaching the same youth history or mathematics. It may be added that the former service often has a more vital bearing upon his satisfaction in life and his contribution to society than the latter.

The idea that vocational guidance is a part of education has been well phrased by Inglis.[2] "If the foregoing is a true statement of what our system should be concerned with, we see clearly that when we consider the question of guidance we are considering not something which is to be added to education, not something which exists outside, but something which is really in the very center of education itself. When we speak of guidance, therefore, we are speaking of an integral part of education, one of the most important parts of it."

[1] Myers, George E. — "A Critical Review of Present Developments in Vocational Guidance with Special Reference to Future Progress," *The Vocational Guidance Magazine*, March, 1924.

[2] Inglis, Alexander J. — "Vocational Guidance in Secondary Education," *The Vocational Guidance Magazine*, October, 1925, p. 3.

Inglis goes on to say: "The point I am trying to make is that vocational guidance or any other form of guidance is not something apart from education as we ordinarily consider it, but rather that we have made the mistake a great many times in the past of limiting our thinking to a kind of education which excluded the important elements of *learning* the pupil and then helping him to find his ability, helping to guide him. That is why we think of vocational guidance, of guidance in general, as something quite apart from the school instead of being a part of it. We find a dangerous tendency on the part of some who have not thought deeply to regard vocational guidance as a piece of machinery added to the regular administration of work in the school, and educational guidance as a matter of advising a child rather than fundamentally a matter of education itself."

Coöperation of other social agencies important. When responsibility for a comprehensive vocational guidance program is placed at the door of the school system this does not mean that other social agencies may not make important contributions to this program. It does mean that leadership belongs to the schools as part of their educational service to the community. It does mean that working out the plans, directing their execution, and checking up on results belong to the schools. It is to be expected, however, that the department or bureau of the school system that is charged with this responsibility will secure the cordial coöperation of other interested social agencies of the community, such as the chamber of commerce, the men's luncheon clubs (Rotary, Kiwanis, Exchange, Lions,

etc.), women's clubs, Young Men's and Young Women's Christian Associations, Boy Scouts, Girl Scouts, Camp-fire Girls, Juvenile Court, etc. Some of these organizations already are engaged in vocational guidance activities of greater or less extent and value. All of them are genuinely interested in the welfare of youth and have connections and contacts that are of distinct advantage to the school program of guidance. And above all, the school naturally will seek the coöperation of the home in attacking this problem.

That vocational guidance is a school responsibility of prime importance has become so obvious in recent years that many educational administrators throughout the country have undertaken to make some provision for it in the schools under their supervision. The remainder of this book will be devoted to a consideration of what the schools of various grades may do in discharging this responsibility.

QUESTIONS AND EXERCISES

1. Should the reduction of waste in the transfer of youth from school to occupations be considered as part of the movement for conservation of the nation's resources? Explain your answer.

2. In the statement of principles of vocational guidance as adopted by the National Vocational Guidance Association is found this statement: "Vocational Guidance is the giving of information, experience, and advice in regard to choosing an occupation, preparing for it, entering it, and progressing in it." How does the statement of what is included in a comprehensive program of vocational guidance, page 41, agree with this?

3. Does this conception of vocational guidance harmonize with the idea that guidance is an integral part of education and

not something added to an educational program? Explain your answer.

4. If the public school system does not accept responsibility for providing vocational guidance service, what other social agency of the community can be expected to do so?

5. In the same city where the telephone company mentioned on page 36 is located, the City Council, on the grounds of economy, refused to approve the Board of Education's budget of $50,000 for vocational guidance and placement. What arguments based upon the experience of the telephone company can you present which bear upon this question? What relation do the experiences of the apprentice and the medical student (see page 35) have to this question?

6. Assuming that the city school system takes a proper leadership in providing a comprehensive vocational guidance service, discuss specific ways in which some other social agency of the community may coöperate.

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CHAPTER IV

THE CONTRIBUTION OF ELEMENTARY EDUCATION TO VOCATIONAL GUIDANCE

In the discussion that follows, the term " elementary education " will be used to include the work of the first six grades only. The seventh and eighth grades will be considered as belonging, with the ninth, to the junior high school period of education, even though in many school systems the junior high school organization has not yet been perfected.

Objectives of elementary education. Any attempt to determine the contribution that elementary education should make to vocational guidance must be undertaken with the objectives of elementary education clearly in mind. These objectives have been stated variously by different authorities. They may be summarized as follows: To give all children common tools with which to work and, by means of common knowledge and experiences, to develop in them fundamental habits, ideals, attitudes, and appreciations that will be useful to them as citizens and consumers.

Elementary education deals with those things which are the common need of all without regard to sex or occupation. It is concerned with the things that unify or integrate people rather than with those that differentiate them.

Relation of these objectives to vocational guidance. Accepting the validity of these objectives, the way is cleared for consideration of the subject of this chapter. On the surface, it may appear that no contribution from elementary education to vocational guidance should be expected. Vocational guidance is not mentioned in any way in the objectives, and properly so. The function of the elementary school clearly is to provide the elements of what, for want of a better term, is called "general education." While vocational guidance, as already pointed out, is distinctively an educational service, it is a specialized service concerned largely with differences between people, and therefore not a definite function of the elementary schools.

A more careful examination, however, gives rise to the question: May not some of the materials used in the elementary school to accomplish the desired ends, or attain the desired objectives, have important vocational guidance values?

Why study the industries in elementary grades? In attempting to answer this question, let us consider at some length the place of one group of man's productive activities in accomplishing the purposes of elementary education. Let us take the group known as the industries, defining this term in its narrower sense as including only those occupations devoted to making changes in the forms of raw or partly manufactured materials in order that they may be more useful to man. Agriculture, mining, trade, transportation, and the professions are, for the time being, left out of account.

As long ago as 1909, Dean Russell,[1] criticizing

[1] Russell and Bonser — *Industrial Education.*

severely the handwork then done in the name of education, presented the case for systematic study of the industries in the elementary school. Part of his argument, with some modifications and illustrations by the writer, follows.

In addition to the " three R's," or the tool subjects as they are sometimes called, education long ago introduced a humanistic element into the schools for the purpose of helping to adjust the child to his social environment. This consisted of literature, history, geography, music, art, and the like. Later, with the wonderful development of science, it became necessary to introduce a scientific element for the purpose of helping to adjust the child to his physical environment. Among the subjects included in the scientific element introduced into the elementary schools, are nature study, hygiene, and elementary general science. For example, as long as it was the accepted belief that sickness was an act of Providence, hygiene had no place in the schools. But when medical science revealed the real nature of sickness and disease, particularly of the communicable diseases, such as typhoid fever and tuberculosis — showing that they are caused by germs, how they are transmitted from the sick to the well, how to avoid contracting them, and the like — then a body of subject matter in hygiene, of vital importance to the child in his relations with his physical environment, found its way into the schools.

Along with the scientific development, and partly as a direct result of it, has come the most remarkable industrial development the world has ever seen. Work that formerly was carried on in the home or little village

shop, where children could see what was done, how it was done, and under what conditions (in many cases helping to do it), has been transferred to great manufacturing plants employing thousands and even tens of thousands of workers. From processes performed slowly and carefully by hand, industry has changed to processes performed by intricate and powerful machines with tremendous rapidity. Age-old industries have been revolutionized and new ones have been developed, and both have been shut in behind factory walls with the " no admittance " sign over the door.

Take, for example, the manufacture of woolen clothing. In colonial times, and even later, most children saw sheep feeding in the pastures and saw them taken to the brook in the spring of the year to be washed. Later they saw the fleece sheared from the sheep and saw the wool carded, spun into yarn, woven into cloth, and made into garments, some of which kept them warm in winter. What does the average boy or girl know today, from actual observation, about the making of woolen clothing? He knows how it looks, how it feels, that it is purchased at the store, and that it keeps him warm. He knows little or nothing by experience about where wool is grown or how. He knows nothing of the processes of washing the wool, carding, combing, spinning, weaving, and finishing, as these are carried on in the great woolen mills of today, nor of the modern methods of making the woolen goods into garments. He knows nothing of the conditions under which the work is done, little of the importance of the woolen industry in the life of his time, and very little of the artistic or wearing qualities of products of the woolen

mills and clothing factories. The same thing is true of other industries.

And while the modern factory system has deprived our children of the opportunity to see how the industries are carried on, these same industries have come to occupy a larger and more important place in the social, economic, and political problems of the city, state, and nation than ever before. The big questions that occupy Congress and the state legislatures and enter into the political campaigns are largely questions growing out of modern industry. Among them are the tariff on manufactured products in order to protect against foreign industrial competition; anti-trust laws to prevent big industrial organizations from becoming too powerful, and stifling competition; workmen's compensation laws; factory inspection laws; child labor laws; laws governing hours of labor, strikes, lockouts, housing conditions in centers grown congested because of industry; and so on through a long list.

There is, therefore, abundant reason why, in order to help adjust children to the large and tremendously important industrial environment which surrounds them, an industrial element should be added to the humanistic and scientific elements already introduced into elementary education. And most children will find this industrial material, when properly presented, quite as interesting, quite as easily mastered, and quite as worth while, from the point of view of general education, as much of the material now offered in other school subjects. For instance, a study of the lumber industry, its place in the development of the country, our dependence upon it today, the principal lumber centers, the

processes of lumbering, conditions under which the men work and live, uses of the different kinds of lumber, etc., can be made very interesting and valuable to a boy of ten years.

It should be understood, however, that the study of the industries under discussion has for its purpose general education. It does not aim to make electricians, or carpenters, or plumbers any more than the study of art or music in the elementary schools aims to make artists or musicians. It seeks to give an understanding and appreciation of the most essential things involved in the work done by large numbers of our people — work out of which arise many social, economic, and political problems. The product sought is more completely developed individuals, better citizens, and more intelligent consumers, not skilled mechanics. This general educational purpose is well expressed by Bonser and Mossman.[1] " The materials, processes, conditions of production, and the purchase and use of the products of the more important industries may be studied for the values which such study affords in one's everyday life, regardless of his occupation. Such a study of industrial arts, we describe as ' general.' To realize its purposes, we make no attempt to develop any considerable degree of skill in any of the several industries studied. Productive skill is not included in its purposes as it is in vocational education. The field includes numerous industries, not limiting itself to one industry as in vocational education.

" The purposes or outcomes of the general study are

[1] Bonser and Mossman. — *Industrial Arts for Elementary Schools*, p. 6.

realized in the degree in which it helps one to become efficient in the selection, care, and use of the products of industry, and to become intelligent and humane in the regulation or control of industrial production. This study is from the point of view of the problems, opportunities, and obligations of the consumer and the citizen."

What industries should be studied in the elementary grades? When one attempts to select the industries that should be given attention in the elementary school, he finds himself confronted with an embarrassment of rich material. His problem is not to find enough but to select the best from the wealth before him. His guiding principle in selection must be relationship to the objectives of elementary education. Bonser and Mossman [1] have expressed this well. " That field of industry comes first which has the largest relationship to the common needs of life. Those industries having least relationship to the common needs of life would be omitted, judged constantly, as they must be, from the point of view of the consumer and citizen. By this standard, industries devoted to the production of food, clothing, and shelter would stand at the top of the list, those concerned with the making of walking sticks or artificial limbs would be omitted."

It should be noted, also, that not all parts of any industry are of equal value for educational purposes. Selection within the industry becomes necessary. To quote Bonser and Mossman [2] again: " Within any

[1] Bonser and Mossman. — *Industrial Arts for Elementary Schools*, p. 21.

[2] *Ibid.*, p. 22.

industry, selected because of its importance to life, those parts would be chosen which furnish the greatest help in meeting our common needs. Not all phases of even a single industry may yield values in terms of our purposes sufficient to make it worth while to include them. For example, a study of the materials employed in the clothing industries provides much help in problems of selecting clothing, but developing skill in any of these processes yields little that is measurable by our standards of value."

It follows from what has been said concerning the relationship of the material that is chosen to the common needs of life, that the best basis both for selection and organization of this material is the uses of products of the industries. " The large uses of material products center very conveniently for classification about the needs of man for six kinds of service which are respectively : food, clothing, shelter, utensils, records for transmitting experiences, and tools and machines. The subject matter making up such an organization is found largely in answer to two questions : (1) What are the changes made in materials which increase their values to make them most useful and satisfying in meeting these six respective forms of need? (2) What are the problems relating to these changes which concern us as consumers and citizens? " [1]

It is not the purpose of this chapter to go into the organization of industrial arts material for the elementary school. This has been done in a thorough manner by Bonser and Mossman in the book already

[1] Bonser and Mossman. — *Industrial Arts for Elementary Schools*, pp. 26–27.

quoted, where suggestive material is presented for each of the first six grades from each of the six kinds of service needed by man: food, clothing, shelter, utensils, records, and tools and machines.

How provide for such study of the industries? The question naturally arises : Does not such a study of the industries require departmental teaching in the elementary school? Is it not necessary to have a teacher for the industrial arts work who is so well trained in the manipulative and art sides of her subject that she cannot adequately be prepared to teach other subjects of the elementary school also? It is, of course, important that the teacher should be well trained in the the manipulative and art sides of industrial arts. It is equally important that she should understand the economic and social aspects of this subject. But it does not follow that industrial arts in the elementary school should be taught by a specialist who teaches nothing else. The subject should have its time allotment in the curriculum in the same way as do the historic three R's and the other standard subjects of the elementary school, and all may be taught, and generally will be, by the same teacher. If, however, the platoon system of elementary education is accepted, with departmental teaching of some subjects, then a special teacher of industrial arts may be provided, if desired. The important thing is that this subject, which touches all others so intimately, should be a unifying factor in the curriculum and full advantage should be taken of the many opportunities to correlate other subjects with it. This is more likely to be done when one teacher has responsibility for all the work of a class, provided this

teacher is properly prepared to teach industrial arts as well as the other subjects.

However, details of organization and method need not be considered further. They may safely be left to those whose special field is industrial arts in elementary education. What does concern us here is the place that study of the industries should have and gradually may be expected to attain in elementary education and the general character of such study.

Under the names of manual training and household arts, some of the aspects of industrial arts as discussed above have long been accepted as part of elementary education. But the manipulative and process aspects in a very limited number of industries have claimed nearly all the time and attention. And often the work has had little relation to other subjects of the curriculum and less relation to life. In recent years, the tendency has been in the direction of a much broader and more genuinely educative treatment of the subject.

Relation to objectives of elementary education. It is apparent from this discussion that study of the industries in the elementary school not only harmonizes with the objectives of elementary education, but is essential to the realization of the objectives, provided the study is so conducted that it results in desirable changes in behavior "in one's selection, use, and enjoyment of the products of industry; in one's participation in the securing of just and fair treatment for producers in industry and for consumers of products; and in one's taking an intelligent interest in the processes, products, and workers in industry as changes

in these result from the use of new materials and methods." [1] We have seen that there is a wealth of material for this kind of study from which selection must be made upon the basis of relation to the needs of life. And we have seen that the tendency today in elementary education is strongly in the direction of this type of study of the industries, in place of the older type which emphasized chiefly manipulation in a very limited range of activities, some of which have little relation to the life of the average individual.

Similar study of other fields of activity desirable. There is no good reason, however, why such study should be limited to that field of human activities, broad as it is, which is known as the industries. Agriculture, mining, transportation, trade, and the professions also have a close relationship to the lives of all of us, as well as have those activities which bring about changes in raw materials in order to fit them for human use. A similar study of these fields along with the industries is essential to full realization of the objectives of elementary education.

The growing of cereals such as corn, wheat, and oats; of fruits, of vegetables, of fiber crops such as cotton and flax, and of live stock; the extraction of minerals such as iron, coal, copper, oil; lumbering; the transportation of these raw materials of farm and mine and forest; the manufacture of these materials into finished products for human use; the distribution and sale of these products as they come from the factories; and professional service — all these are involved. The extent

[1] Bonser and Mossman. — *Industrial Arts for Elementary Schools*, p. 29.

to which they are involved is determined only by the time that can be devoted to this kind of study and the way the subject matter is organized and presented.

Taken together, these constitute the world's work at which humanity spends more than half of its waking hours, by means of which it subsists, and through which are provided the products and service humanity uses and enjoys.

Surely nothing is more closely related to the needs of life than this. And, if treated in its broader aspects, nothing is richer in value as material of general education. Here in the world's work, history, geography, community civics, and elementary sciences find their applications and, to a large extent, their motivation. Here also arise the problems of arithmetic and the need for reading and writing. The world's work might well be made the integrating factor of elementary education.

Significance of such study for vocational guidance. When elementary education gives to boys and girls an acquaintance with the world's work, it will make all the contribution to vocational guidance that may be expected of it. While the objective throughout is general education, a background of information concerning occupations will be built up which will be of distinct value later when a decision must be made, or when a more comprehensive study of occupations is undertaken for vocational guidance purposes. The information will not be detailed or complete concerning any occupation. It will not deal with requirements for success or opportunities for advancement. It will place different occupations in the scheme of the world's work for the child. It will give him some idea

of the nature of the work done in different occupations and of the history, the social status, and the contribution to society of each. It will build up a subconscious foundation which will determine to greater or less extent the child's later thinking and planning concerning his life work.

Occupational information for guidance purposes not desirable. Brewer [1] holds the view that definite provision should be made in the elementary grades for supplying occupational information to children for vocational guidance purposes. To be sure, he is thinking of elementary school work as it is conducted in most places today and not as it is when an adequate treatment of the world's work as part of general education is provided. Whether he would take the same view under the latter conditions is problematical. The writer is unable to justify this view. It certainly is not essential to a successful program of vocational guidance. Choice of occupation is a differentiating factor in the lives of children. The elementary school is concerned with those elements of study which are of common value to all, regardless of sex or future occupation. Let us reserve the differentiating factors for a later period of education.

It may be argued that many children leave school at the end of the sixth grade and will have no help in choosing an occupation unless it is provided in the elementary school. Where compulsory education laws are enforced, the number of normal children who leave school without completing the sixth grade is extremely small. Subnormal children constitute a special prob-

[1] Brewer, J. M., — *The Vocational Guidance Movement.*

lem and should be handled in special classes, as they are in most city school systems. What vocational guidance they need, and they need some even though most of them will engage in unskilled work all their lives, can and should be provided in their special classes. In systems too small to maintain special classes for subnormals, the problem should be handled individually without modifying the elementary school work as a whole in order to meet the needs of a few.

QUESTIONS AND EXERCISES

1. Are not certain recent tendencies in education, for example, emphasis upon individual instruction, based upon differences between children? How does this attention to individual differences between elementary school children differ from that which is necessary in vocational guidance? Consider the question with reference to objectives, methods, and content.

2. Select some important industry and show:

a. What opportunities children of the first six grades have, without the aid of the school, to become acquainted with its processes, the environment and working conditions of its workers, its importance in comparison with other industries.

b. Some of the ways in which this industry affects other industries.

c. What important social, economic, and political problems of the city or state are closely related to this industry.

3. Make a list of ten manufacturing industries represented in your community and arrange them in two groups according to their relationship to the common needs of life, one group having a larger relationship than the other.

4. Is it possible to realize the objectives of elementary education without giving study of the industries an important place in the curriculum? Why or why not?

5. Give as many illustrations as you can of ways in which elementary schools are providing for study of the industries, and evaluate one or two of the illustrations in relation to the objectives of elementary education.

6. Is not the world's work, broad as it is, too narrow to be made the integrating factor of elementary education? Are there or are there not some of the finer values of life which should have a place in elementary education and which cannot be brought in properly in connection with study of the world's work? If so, what are they? Is there danger of giving boys and girls too great an interest in the material aspects of life by such study?

7. Point out ways in which the information obtained by the pupil from such study of the world's work as has been discussed in this chapter would aid in choosing an occupation.

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CHAPTER V

OCCUPATIONAL INFORMATION COURSES

With the completion of the elementary school period at the end of the sixth grade come new educational needs. Integrating education must continue, to be sure, but it loses its dominance at the threshold of the junior high school. It is no longer sufficient for the school to deal only with those things which are the common need of all, men and women, unskilled worker and professional man alike. From this point onward, individual differences must receive more attention. And in no aspect of life do these individual differences stand out more strikingly than in the matter of vocational interests and possibilities. At this point in the child's life, the time has come for the school to begin to give definite assistance in choosing an occupation.

Occupational information a first step in guidance. When direct efforts are made to provide an individual with adequate assistance in choosing an occupation, it becomes apparent that the task includes, first of all, acquainting him with information concerning occupations from which his choice may be made. In recent years occupational information in some form or other has found a place of increasing importance in the curricula of junior high schools. Similar material has been introduced to some extent, also, in the seventh and

eighth grades of the traditional elementary school and in the four-year high school. In some schools this material has been made part of the work in English or civics or some other subject, while in others a separate course in information concerning occupations has been offered.

Present extent of occupational information courses. The Junior High School Committee [1] of the Commission on Secondary Schools of the North Central Association of Colleges and Secondary Schools, reporting in March, 1925, included vocational information as a separate subject in the program of studies proposed for a standard junior high school. At the same time the Committee stated that 15.4 per cent of the 207 junior high schools in North Central territory which reported that year offered such a course. No evidence is available as to the percentage of traditional elementary schools which offer a vocational information course in the seventh or eighth grade, but it is probably much smaller than the junior high school percentage. The secretary of the North Central Association in his 1925 report [2] covering 1571 accredited public high schools, including both senior and four-year high schools, does not mention occupational information as one of the long list of subjects offered. He does, however, mention vocational civics along with community civics and reports the two together as offered in 31.2 per cent of the schools and taken by 6.8 per cent of the 678,935 pupils enrolled. Considering the extent to which community civics is

[1] *Proceedings of the Thirtieth Annual Meeting of the North Central Association of Colleges and Secondary Schools*, Part I, pp. 67, 73.

[2] *Ibid.*, pp. 51, 52.

known to be offered it is evident that vocational civics, which may include much or little occupational information, has not yet found an important place for itself in the regular high schools of the North Central Association. As noted above, in a few high schools efforts have been made to include the study of occupations as part of the work in English or other subjects. In fact Edgerton's study [1] of 143 cities throughout the country, which report vocational guidance activities, shows a slightly larger number of classes studying this subject in English, civics, practical arts, etc., than in separate credit courses. In an investigation conducted by the writer in 1926 it was found that of 113 cities of 50,000 or more population from which answers to the inquiry were received, 39 offer a special course in occupational information and 42 report that this information is stressed in other subjects. Twenty-two of the 42 report special courses also and are therefore included in the 39.

The Alabama program. A noteworthy effort to give occupational information an important place in the junior high school program of studies has been made in Alabama.[2] The State Board of Education, authorized by law to " prescribe the minimum contents of courses of study for all public elementary and high schools in the state," has made the study of occupations a required subject five periods per week in the first semester of the junior high school (seventh grade). One of the standard textbooks on occupations is used for this course.

[1] Edgerton, A. H. — *Twenty-Third Yearbook of the National Society for the Study of Education*, Part II, p. 7.

[2] State of Alabama — *Program of Studies and Adopted Textbooks for County and Rural High Schools*, July 1, 1925.

Regular Program Adopted for Junior High School in Alabama

	Junior High School First Year		Junior High School Second Year		Junior High School Third Year	
	Subject	Periods per wk.	Subject	Periods per wk.	Subject	Periods per wk.
Constants	English	5	English	5	English	5
	Social Studies	5	Social Studies	7	Social Studies	5
	General Geography	2	General Geography Cont'd	2	Community Civics	2
	Current History	1	Current History	1	Current History	1
	American History to 1865	2	American History Cont'd	2	Industrial Geography	2
	Mathematics	5	Community Civics	2	Physical Education and Hygiene	4
	General Science	3	Mathematics	4		
	Physical Education and Hygiene	4	General Science	3		
	Study of Occupations (1st sem.)	5	Physical Education and Hygiene	4		
	Practical Arts (1st sem.)	2				
Electives	Occupational Studies for Boys; Double Periods (2nd sem.)	5	Occupational Studies for Boys; Double Periods	5	Mathematics	5
	Occupational Studies for Girls; Double Periods (2nd sem.)	5	Occupational Studies for Girls; Double Periods	5	Occupational Studies for Boys; Double Periods	5
	Foreign Language (2nd sem.)	5	Foreign Languages	5	Occupational Studies for Girls; Double Periods	5
	Appreciation of Music	1	Appreciation of Music	1	Commercial Arts	5
	Art Studies for Appreciation	1	Art Studies for Appreciation	1	Business Arithmetic (1st sem.)	5
					Bookkeeping (2nd sem.)	5
					Foreign Languages	5
					Vocational Agriculture	5
					Appreciation of Music	1
					Art Studies for Appreciation	1

In addition "occupational studies," five double periods per week, are offered as electives throughout the remaining two and one half years. Only one other major elective, a foreign language, is offered during the first and second years, and two others during the third year. A chart showing the program of studies is given on the previous page.

While the "occupational studies"[1] are chiefly try-out courses, with emphasis upon projects, provision is made also for pupils to obtain much additional information of guidance value concerning the occupations represented in the courses.

An outline for study of occupations. The outline usually followed in studying an occupation for guidance purposes has become pretty well standardized. The one given below, used in Detroit, is typical.[2]

1. Nature of the work.
2. Main advantages and disadvantages.
   - *a.* Factors that interest and develop the worker.
   - *b.* Factors that cause physical or nervous strain.
   - *c.* Factors that restrict mental growth.
   - *d.* Factors that are in other respects important as affecting the welfare of workers (*i.e.* liability to accidents, occupational diseases).
3. Qualifications and training needed.
   - *a.* General education.
   - *b.* Necessary technical education.
   - *c.* Manipulative skill.

[1] State of Alabama, Dept. of Education. — *Occupational Studies for Boys — Junior High School.*

[2] Edgerton and Cunliff. — "A Public School Program for Collecting and Using Occupational Information," *Twenty-third Yearbook of the National Society for the Study of Education*, Part II, p. 121.

d. Other requirements; qualities essential, such as accuracy, etc.

4. Possibilities and requirements of occupation.
   a. Provisions made for systematic instruction.
   b. Necessary technical knowledge.
   c. Manipulative skill.
   d. Extent to which occupation can be learned in establishment.
   e. Line of promotion.
5. Remuneration.
   a. Wages.
   b. Special.
6. Hours of work.
7. Seasonal demand for work.
   a. Busy seasons.
   b. Slack seasons.
   c. Fluctuations in employment.
8. Are workers organized?
9. Entrance age.
10. Time required to learn duties.
11. Is supply of labor adequate to meet demand?
12. Is demand for labor increasing or decreasing?
13. What is the source of supply?
14. Common deficiencies of workers.

What occupations should be studied? Anyone who goes through this outline carefully with a specific occupation in mind will realize at once that the number of occupations that can be studied by a pupil in junior high school is comparatively small, especially when it is remembered that study of occupations as a special subject seldom occupies more than five periods per week for one semester. It becomes necessary, therefore, to

select from the thousands of occupations those which shall be given consideration in the course. On the other hand, it is important that each pupil should have a broad view of his opportunities in the world's work before deciding what he wishes to do. On this account it seems wise to give attention first to the principal characteristics of the large groups of occupations and the important differences between them. Probably no better grouping can be found for this purpose than the one used by the United States Census in its 1920 report, which includes agriculture, forestry, and animal husbandry with 10,953,158 workers; extraction of minerals with 1,090,223; manufacture and mechanical industries with 12,818,534; transportation with 3,062,582; trade with 4,242,979; public service with 770,460; professional service with 2,143,889; domestic and personal service with 3,404,892; and clerical occupations with 3,126,541. A fairly detailed, sympathetic study, according to the outline, of one or two typical occupations in each of these nine groups may well follow a more general consideration of the characteristics and differences of the groups. The selection of further occupations for study will naturally be governed by their importance in the life of the country as a whole, the extent to which they are followed locally, the type of community in which the school is located, and the interests of the members of the class. It is especially important that each member of the class be encouraged to study carefully any occupation in which he is keenly interested. Any textbook on occupations, however good it may be, should be used with the above points in mind. Some omissions and many additions will be

necessary in any community in order to meet the needs of a given class, though a good text is very valuable as a guide.

Place of the occupations course in the program of studies. The best place in the program of studies for a special course in occupations depends to some extent upon the plan of organization of the school system. If the six-three-three plan has been adopted, the logical place is in the first year of the junior high school, either five periods per week during the first semester or two or three periods per week throughout the year. The reason why this is the logical place is because pupils usually must choose between general, commercial, and practical arts curricula at the end of the first year of junior high school. If the eight-four plan of organization is in effect, the course in occupations may well be given in the eighth grade, though local conditions may sometimes make desirable its postponement to the ninth grade, or first year of the four-year high school. As a matter of fact, the writer's investigation already referred to in this chapter shows that the ninth grade has a decided preference in the larger cities which have introduced this work. The guiding principles in determining the proper place of this course in the program seem to be: (1) it should be given before large numbers of pupils leave school; (2) it should precede by a short time the differentiation of school work which makes it necessary for pupils to choose between several different curricula. As noted above, this makes the first year of the junior high school a good place for the subject, or at least for that part of it which deals with differentiation between the large groups of occupations. In school

systems where few pupils leave before completing the ninth grade or last year of the junior high school, work dealing with the large groups of occupations might be given in the seventh grade and more detailed study of specific occupations be reserved for the ninth grade.

Worthy of place as separate subject. It is argued in some school systems that not only the seventh grade but the entire program of the junior high school is already too crowded to permit the introduction of a new subject, and that whatever study of occupations is carried on will have to find its place in English, the social studies, or some other established subject. At the present time, occupational information is stressed most often in the practical arts and next in the social studies — civics, history, geography, economics — according to reports received from the larger cities. The evidence from schools that have tried to provide adequate information concerning occupations through other subjects is decidedly against this plan. Occasionally it may be done well, but generally it is done very poorly. In one high school with which the writer is familiar, it was done fairly well for a time through English under the leadership of a principal who was thoroughly interested, and later was done so poorly as to be considered a joke by the pupils. The average teacher of English feels responsibility for teaching English, not occupational information. Besides, few teachers of English know or care enough about occupations to teach the subject well. The same is true of other established school subjects. Moreover, the subject matter of a good course on occupations is sufficiently valuable educational material to merit a place of its own in the program of studies.

Pupils will respect it more and treat it more seriously if it is an independent subject. If such a situation exists in a school system that it is impossible to introduce occupational information as a special subject, it may be wise to incorporate it in some other subject; but such a situation ought not to exist or, at least, ought not to be permitted to continue.

Tendency to require this subject. Even when assigned a place in the school program as a separate subject, occupational information is not sure of a fair chance, as is shown by the following criticism made by the director of vocational guidance in a large city: "The occupations course is an elective and for some reason was placed in the commercial curriculum. For that reason it is taught by commercial teachers. In one high school there are 10 classes, all taught by teachers of bookkeeping. The teachers change from semester to semester. The teachers are untrained and unqualified to teach occupations. When handled by civics teachers it is done better, but there is room for improvement. It is unsatisfactory at present because:

1. It is in the commercial curriculum and only commercial students enroll for it.
2. It is an elective.
3. Teachers at present are not qualified to teach it."

If the special course in occupations is to perform effectively the purpose for which it is intended, it must be a required subject and must be taught by those who are at least as well qualified to teach this particular subject as are teachers of English or physics or French to teach their subjects. In 1926 only 25 of the 113 large cities

already referred to reported that this subject is required. And in these 25 cities there can be no doubt that many of the teachers are poorly qualified, at least as far as special preparation is concerned, for their difficult task. But the present tendency is strongly in the direction of making provision for effective teaching of this important subject.

Occupational information in other subjects. On the other hand, every subject teacher should be expected to assist his pupils to obtain significant information concerning the occupations which are closely related to, or depend to a large extent upon, his subject. For example, the teacher of mathematics should help his pupils to understand the opportunities and requirements of engineering, of mathematics teaching, and of other occupations in which a considerable knowledge of mathematics is essential. Teachers of English, physics, chemistry, biology, and other subjects should do the same in their respective fields. In case of the so-called try-out subjects, which will be discussed in the next chapter, special attention should be given to this matter. Such attention is provided for in the Alabama " occupational studies " already mentioned. A teacher of agriculture, or shop subjects, or commercial subjects who is content to stress technical subject matter, processes, and projects without helping his pupils to acquire additional information of guidance value concerning the occupations represented, is missing a rare opportunity for genuine service. And this is true even though the pupils may have been over the same ground in the occupations course. The information will come with new force and meaning when obtained in connec-

tion with actual experiences selected from the occupation and under the leadership of the one who is directing these experiences. The teacher who is in charge of the special occupations course should coöperate with the other subject-matter teachers in making this work effective.

Methods of teaching an occupational information course. Methods of teaching a subject of this character to be effective must bring into play pupil initiative and pupil activity as fully as possible. Each pupil should be required to gather material on points covered by the outline, from books and pamphlets in the library, from newspapers and magazines, from workers in the occupations that are studied, from visits to shops and offices where the occupations are carried on, and from other sources. Class debates upon the relative merits of occupations, oral reports to the class, and written reports, the best of which may be published in the school paper, should be encouraged. The teacher, to be sure, must see to it that the information brought together in this manner is accurate and reliable. Occasionally a successful man or woman representing the occupation under consideration may be brought before the class to present his or her views as to the advantages and disadvantages of the occupation and methods of winning success in it. The speaker, however, usually needs to be given in advance an outline indicating the points in which the class is interested, and the pupils should have a chance to question the speaker concerning points not covered or not understood. Moreover, the speaker should be selected with great care.

The teacher who gives the course in occupations will

find the school library and the public library indispensable allies. The alert teacher will see to it that librarians become interested in obtaining occupational information material, in placing this material where it is easily accessible to pupils, in calling their attention to it by means of bulletin board announcements, and in other ways. Librarians usually can be depended upon to coöperate most cordially in work of this character.

Using agencies outside the school. Some of the business men's luncheon clubs and similar organizations are ready to give important assistance also. It is often possible to arrange through a committee of the club for individual members to discuss the occupations in which they are engaged with individual boys from the high school who are interested in the same occupations. An excellent piece of work of this general character has been carried on for several years in Peoria, Illinois, under a committee of seven men representing a variety of interests.[1] Two members of the committee are principals of the city's high schools, but the plan was initiated outside the school system, owing to the fact that the schools were not yet ready to organize a vocational guidance program. A former president of the Peoria Rotary Club is an active member of the committee, which has definitely sought the aid of the various luncheon clubs of the city. The committee selects a group of business and professional men representing different occupations to serve as interviewers and gives them a brief training in the

[1] Ericson, E. E. — "A Coöperative Guidance Program," *Monograph No. 2*, 1925 Series, The Vocational Education Association of the Middle West.

work expected of them. Self-analysis blanks filled out by high school boys are distributed personally by committee members among the interviewers according to the occupational choices of the boys. At the same time the interviewer is requested to write a personal letter asking the boy assigned to him to call up on the telephone and arrange for an interview. The committee member also writes the boy telling him that his blank has been turned over to Mr. *X* and that he may expect to hear from him. The following is a typical letter from a committee member to a boy:

"The Boys' Work Council of Peoria, which is composed of a group of business men who are interested in vocational problems of boys, would like to offer you some further service in connection with the self-analysis blank which you filled out at the Manual-Training High School.

"From the blank it has been observed that you are interested in accounting, salesmanship, and stenography. Mr. T. S. Schlink, of the Central Gas and Light Company, is one of the men interested in boys' problems. He is an expert accountant and would be glad to give you his experience and such information as you may care to have in connection with the line of work which you have in mind. If you care to call Mr. Schlink at Main 3340, he will be glad to give you an appointment.

"All this information is given free by the Boys' Work Council and all the men are more than glad to give all the time that the boys may need in getting a good outlook on the line of work they may later choose for a life's vocation.

"I shall be glad to see you personally at any time and can give you additional names of men with whom you may have interviews."

A course in occupational information can be supplemented and made more interesting and valuable in this manner. The school organization for vocational guidance, where one exists, will find it desirable to take the initiative in working out the arrangements for such an undertaking.

QUESTIONS AND EXERCISES

1. Select some occupation and bring together from the literature on occupations the information concerning it which is called for in the outline on pages 66 and 67. Are there other things you would like to know about this occupation if you were thinking of entering it? If so, what are they?

2. In city *A*, children are permitted by state law to leave school at fourteen years of age to enter employment, and do so in large numbers. In city *B*, located in another state, the compulsory school age extends to sixteen years. How and why may the arrangements for providing occupational information differ in the schools of the two cities?

3. City *C*, in which the compulsory school age is sixteen, had a four-year high school, with an occupations course in the ninth grade. A change was made to the three-year junior and three-year senior high school plan and emphasis was placed upon vocational exploration in the eighth and ninth grades. How should this change have affected the occupations course? Consider the possibility of dealing with large groups of occupations in one grade and specific occupations in another.

4. Assuming that a special course or courses in occupations is desirable, how can the teacher of physics supplement this work? The teacher of English? The teacher of manual arts? The teacher of household arts? Be specific.

5. In a certain city, a special course in occupations is given in each of the two junior high schools. An investigation showed that in one school the subject was popular, while in the other school it was the most disliked subject. Suggest possible reasons for the difference.

6. Propose a plan for the first lesson in a course on occupations which you think would introduce the subject in a manner that would appeal to junior high school pupils.

7. Give as many reasons as possible why it is unwise to use a large number of successful workers in occupations as speakers before the class in presenting occupational information.

8. What precautions are necessary in order to obtain the best results when arrangements are made for pupils who are interested in certain occupations to interview successful workers in these occupations?

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CHAPTER VI

OCCUPATIONAL TRY-OUT OR EXPLORATORY EXPERIENCES IN THE JUNIOR AND SENIOR HIGH SCHOOL PERIOD

Exploratory function of the junior high school. Authorities on the junior high school or intermediate school, as it is sometimes called, embracing the seventh, eighth, and ninth grades, agree that one of the most important functions of this school is to provide try-out or exploratory experiences for its pupils. This, they say, is the period *par excellence* for exploration of a great variety of individual tastes, interests, and capacities — artistic, literary, scientific, linguistic, and vocational.

Koos,[1] in discussing the junior high school, points out that the function of exploration for guidance is a corollary to the function of recognition of individual differences. He maintains that, since differences among pupils are of sufficient importance to be recognized, provision should be made for the discovery of these differences.

Briggs[2] places third in his list of five things the junior high school should attempt: "To explore, by means of material in itself worth while, the interests, aptitudes, and capacities of pupils." He says further:

[1] Koos, L. V. — *The Junior High School*, p. 48.

[2] Briggs, T. H. — *The Junior High School*, pp. 165–167.

"This purpose is based on a recognition of insuperable differences that become of increasing importance as pupils approach the age of leaving school. . . . Aptitudes and capacities, which are almost entirely innate, have a great range. . . . The wasteful effort to make scholars of pupils who have aptitudes for mechanics, or to give a professional training to those who inherit a capacity for doing well only those tasks that may be satisfactorily performed by limited intelligence, has been abundantly seen in the past. . . . As there are no means of knowing with any degree of accuracy the differences of children in interests, aptitudes, and capacities at the end of the elementary school period, it is argued that it is an essential function of the intermediate school to ascertain what these differences are, so that advanced schooling may offer training adapted to them. . . . The intermediate school courses should explore the interests, aptitudes, and capacities of pupils in all the more important fields of learning, which include industrial activities."

Davis[1] states the case even more emphatically: "Of all the functions of the junior high school, that which seeks to aid pupils in discovering their own capacities and limitations, interests and distastes, powers and weaknesses, is, in the judgment of the writer, the most important. It is this function above all others that justifies the reorganization of schools on a new basis."

Inglis,[2] in a paper published since his death, presents

[1] From Davis, *Junior High School Education*, p. 99. Copyright 1924 by World Book Company, Publishers, Yonkers-on-Hudson, New York.

[2] Inglis, Alexander J. — "Vocational Guidance in Secondary Education," *Vocational Guidance Magazine*, Vol. IV, No. 1, p. 4. Oct. 1925.

much the same point of view in these words: "Those of you who are following the tendency toward reorganization which we ordinarily speak of as the reorganization of secondary education, because it occurs in the upper end of the school system, and who are familiar with the literature of the junior high school, know that one of the fundamental reforms that we are trying to bring about in the 7th, 8th, and 9th grades is the provision for as great an amount of educational exploration as may be feasible, with due regard to other problems that are confronted at that time; the attempt to make far better provision for what we ordinarily call the exploratory function; to provide children with broader and richer forms of educational contacts, so that they, for themselves, may develop interests, may learn something of their own limitations and capacities as far as certain walks of life are concerned; so that we ourselves, when we advise children, may have a tangible basis of experience, so that we may advise them what sort of subject matter, what sort of education is necessary if they are to follow a commercial, an agricultural, or any other kind of calling."

Exploration in senior high school and college. The exploratory function of education persists in the senior high school and even in college, though it is not so dominant in either of these institutions as in the junior high school. Preparation for an occupation already chosen or for the college work that precedes definite vocational preparation, already begun in the last year of the junior high school, becomes increasingly important in the senior high school and takes the place in part of the try-out purpose in the work of the seventh,

eighth, and ninth grades. That the exploratory function continues to have a place, however, throughout the entire period of secondary education is well brought out by Inglis.[1]

Exploration in the eight-four type of organization. It must not be assumed from what has been said that the traditional elementary school and the four-year high school have not provided and do not now provide try-out experiences. Some subjects have been offered for this specific purpose in schools of this type. Witness, for example, the try-out courses given in the seventh and eighth grades of certain New York City elementary schools organized on the Ettinger plan, and the practical arts courses long offered in most four-year high schools. Other high school subjects have served a try-out purpose without being organized with this in view. For example, high school mathematics has tested, in certain respects, many a boy's fitness for engineering, and high school science has helped many another to discover his aptitude or lack of it for a scientific career. What is said in this chapter should be considered as applying to the junior and senior high school period rather than to any specific type of organization, though it will be based upon the three-three type of organization for grades seven to twelve, since this lends itself best to exploratory purposes.

Exploration for vocational guidance purposes. In the discussion that follows, attention will be given only to those try-out or exploratory experiences which look toward vocational choices. Exploratory experiences for the sake of the personal, social, or civic aspects

[1] Inglis, Alexander J. — *Principles of Secondary Education*, p. 370.

of life concern us here only as they have significance for diagnosis of vocational interests or aptitudes.

There are various bases of classification which might be used in studying the subject of vocational try-out experiences in the junior and senior high school period. For the purposes of this chapter, they will be grouped under three headings: (1) try-out experiences provided in the school through the subjects of the curriculum; (2) try-out experiences provided in the school by means of extracurricular activities; and (3) try-out experiences provided outside the school in part-time, after-school, or summer employment.

Vocational try-out courses in junior high school. Most junior high schools make extensive provision for vocational try-out courses. The offerings specifically for this purpose include agriculture, commercial subjects, household arts, and industrial arts, the last named including mechanical drawing. In some schools, the vocational try-out function is stressed in music and free-hand drawing. Especially is this true in case of free-hand drawing where the commercial applications of the subject are emphasized.

It is understood, of course, that all these subjects are expected to serve other purposes also. The material offered should always be "in itself worth while," as Briggs puts it, though this must not be considered as minimizing the "worth-while-ness" of the try-out purpose.

The extent to which these different lines of work are offered in junior high schools is shown by the following table representing all junior high schools in the territory of the North Central Association of Colleges and Sec-

ondary Schools at the time the investigation was made. While this material is now several years old, it is believed that the situation has not changed to any great extent.

PERCENTAGE OF JUNIOR HIGH SCHOOLS IN NORTH CENTRAL TERRITORY OFFERING SEVERAL SUBJECTS AS ELECTIVES[1]

Latin	27.6
Modern foreign language	27.3
Algebra	24.2
General science	30.4
Manual training	88.7
Domestic science and arts	88.4
Drawing	75.4
Music	71.7
Agriculture	25.9
Ancient history	3.8
General history of modern Europe	6.5
Commercial work	16.7
Distinctive vocational work	5.1
Printing	8.2

It is seen from this table that, in North Central territory at least, manual training and household arts are offered as electives in nearly all the schools and that the percentage of junior high schools offering these subjects is greater than the percentage offering any other elective subject. Many schools require a certain amount of work in these subjects and offer them as electives in semesters of years when they are not required. As one would expect, agriculture is not offered by a large proportion of the schools, nor is commercial work. The former is usually omitted from the curriculum in larger and medium-sized cities while both find a much larger place in senior than in junior high schools.

[1] Davis, C. O. — *School Review*, Vol. XXVI, 326–328.

Typical programs of junior high schools. A few typical programs of junior high schools are given to show the place of these so-called vocational try-out courses in relation to other courses:

DES MOINES, IOWA, PROGRAM FOR JUNIOR HIGH SCHOOLS, 1925–26

REQUIRED SUBJECTS	NO. PERIODS PER WEEK					
	7B	7A	8B	8A	9B	9A
1. English Composition	5	5	5	5	5	
2. English Literature	2½	2½	2½	2½		5
3. U. S. History and Civics	5	5	5	5		
4. Geography and Elementary Science	5		5			
5. Arithmetic		5		5		
6. Art	2½		2½			
7. Music		2½		2½		
8. Health	5	5	5	5	2½	2½
9. Home Economics (Girls)	5	5	5	5		
10. Manual Training (Boys)	5	5	5	5	5	
11. Home Hygiene (Girls)					5	
12. Vocations						5
13. Algebra or Business Arithmetic					5	5
14. Music or Art					2½	2½
Choose any two from the following subjects in the 9th Grade:						
15. Business Training and Penmanship					5	5
16. Latin					5	5
17. General Science					5	5
18. Ancient and Medieval History					5	5

This program includes a larger amount of required work in practical arts than is found in many junior high schools. Manual training must be taken by all boys and home economics (including home hygiene) by all girls, five periods per week for two and one-half years.

It should be noted that agriculture is not offered, and commercial work is elective in the ninth grade only.

DETROIT, MICHIGAN, PROGRAM FOR JUNIOR HIGH SCHOOLS, 1925–26

	7		8				9				SPECIAL	
	B	A	Gen.	Techn.		Com.	Gen.	Techn.		Com.	Industrial	
				Boys	*Girls*			*Boys*	*Girls*		*Boys*	*Girls*
Health	5	5	5	5	5	5	5	5	5	5	3	5
Social Science	5	5	5	5	5	5	5	5	5	5		2
English	5	4	4	4	4	4	4	4	4	4	3	3
Mathematics	4	4	3	3	2	2	3	3	2		3	
General Science	3	2	2	2	2	2	2	2	2	2	2	1
Auditorium	2	2	2	2	2	2	2	2	2	2	2	2
Music	1	1	1	1	1	1	1	1	1	1		1
Art and Design	1	1	1	1	2	1	1		2	1		1
Foreign Language			5				5					
Cooking (Girls)	2	3	1		3	1	1		3			
Sewing (Girls)	2	3	1		3	1	1		3			15
Household Science					1				1			
Shops (Boys)	3	5	1	6		1	1	6			15	
Mechanical Drawing	1	1	1	2		1	1	3			2	
Bookkeeping										5		
Business Practice						5				1		
Statistics										2		
Typewriting										2		
Penmanship						1						
Totals per pupil	30	30	30	31	30	30	30	30	31	30	30	30

It will be observed that the Detroit program offers, in the seventh grade, a single curriculum with no electives. At the beginning of the eighth grade a choice must be made between three curricula, general, technical, and commercial, which are continued through the

ninth grade. Without completing either the seventh or eighth grade, retarded pupils may transfer, under certain conditions, to the industrial curriculum, which is definitely vocational on a Smith-Hughes basis.

ROCHESTER, NEW YORK, JUNIOR HIGH SCHOOL PROGRAM, 1925–26

	7B–7A General		8B–8A Foreign Language	9B–9A Foreign Language	8B–8A Technical	9B–9A Technical	8B–8A Commercial	9B–9A Commercial	7, 8, and 9 Industrial and Household Arts[1]
English	6	6	6	5	6	6	6	5	3
Social Studies	6	6	4		4		4		2
Mathematics	5	5	5	5	5	5		3	3
Science	2	2	2	4	2	4	2	4	1
Health Education	1	1	1	1	1	1	1	1	1
Industrial and Household Arts	3	3	3	3	6	6	3	3	14
Penmanship	1	1	B–½				1	1	
Music	1	1	1½	1	1	1	1	1	
Drawing	1½	1	B–1 A–1½	2					
Foreign Language			2½	5					
Typewriting							A–3½	3	
First Lessons in Business and Mathematics							4½		
Commercial Geography							B–4		
Commercial Occupations							A–½	1	
Bookkeeping								5	
Mechanical Drawing or Design					1½	3			3
Guidance	½	1	½	1	½	1	½		
School Activities	3	3	3	3	3	3	3	3	3

[1] Pupils may elect this curriculum any time after they are fourteen years of age and have completed the work of the 6th grade.

Pasadena, California, Junior High School Program, 1922–23

Seventh-Grade Periods	Eighth-Grade Periods	Ninth-Grade Periods
English 5	English 5	English 5
Geography ½ . . . 5	History and Civics 5	Physical Education . 5
History ½ 5	Physical Education and Hygiene . . 5	
Physical Education and Hygiene . . 5		
Elect One	*Elect Two*	*Elect Three*
Woodwork . . . 5	Sheet Metal . . . 5	Agriculture . . . 5
Agriculture . . . 5	Elementary Mechanics . . . 5	Latin 5
Typewriting . . . 5	Agriculture . . . 5	Design and Representation 5
Penmanship and Spelling 5	Typewriting . . . 5	Pottery 5
Sewing 5	Penmanship and Spelling 5	French 5
Freehand Drawing . 5	Freehand Drawing . 5	Commercial Arithmetic . . . 5
Mechanical Drawing 5	Mechanical Drawing 5	Penmanship and Spelling 5
Music 5	French 5	Sewing 5
General Science . . 5	Spanish 5	Spanish 5
Spanish 5	General Science . . 5	Shopwork 5
French 5	Cooking 5	Printing 5
	Music 5	Mechanical Drawing 5
	Business Arithmetic 5	Algebra 5
	Algebra 5	General Mathematics 5
		Notation and Sight Singing 5
		Instrumental Music 5
		Orchestra 5
		Band 5
		Drum Corps . . . 5
		Bugle Corps . . . 5
		Biology 5
		General Science . . 5
		American Citizenship ½ . . . } . 5
		Ancient History ½ }
		Vocational Civics 5

It will be noted that, in their general plan, the Rochester and Detroit programs are quite similar, though differing in the amount of emphasis upon industrial and household arts after the seventh grade and in the range of commercial subjects offered.

Features of the Pasadena Junior High School program that are of especial interest in connection with our discussion are:

1. The seventh- and eighth-grade work is divided into eight distinct curricula:

a. Manual arts	*e.* Language
b. Mechanical Drawing	*f.* Science
c. Agriculture	*g.* Domestic Science
d. Commercial	*h.* Art

2. Pupils are expected to pursue the same curriculum throughout the three years.

3. One year of shop work is required of all boys before completing the eighth grade.

The practical arts subjects are given a larger place in the Pasadena program than in any other junior high school program that has come to the writer's attention. The amount of agriculture and commercial work offered particularly is noteworthy in comparison with the offerings of Rochester, Detroit, and Des Moines.

Superintendent Hartwell,[1] in describing plans for the junior high school of Buffalo, said: "It is planned to have a wide variety of try-out courses to which the pupils of these schools will be exposed for the purpose of endeavoring to discover their natural tastes and apti-

[1] Hartwell, G. C. — *The Educational Program for Buffalo's Intermediate Schools*, 1920.

tudes." Examination of the Buffalo program, which is not given here for lack of space, will show that this plan has been carried out in the development of the junior high schools of Buffalo.

The Alabama State program, given in the previous chapter, offers five double periods of "occupational studies" per week, chiefly for try-out purposes, in the second half of the seventh grade and throughout the eighth and ninth grades.

In a recent survey [1] of the Chamute, Kansas, School System, conducted by educational specialists from the State University, State Agricultural College, and State Teachers' College, it was recommended that in the seventh grade, five hours each of "industrial art," woodwork and drawing, printing, handwriting, agriculture, and typewriting be offered as electives; that sheet-metal work and bookkeeping arithmetic be added to this list in the eighth grade; and that in the ninth grade, industrial arts, practical electricity, mechanical drawing, applied design, sheet-metal work, typewriting, handwriting, bookkeeping arithmetic, and elementary business methods, each five hours per week, be offered.

It is evident from these illustrations that the amount of attention given to the practical arts in the junior high school differs greatly in different cities. Davis [2] found that in the programs of eleven typical junior high schools in different cities, the number of periods per day devoted to required work in practical arts in the seventh grade varied from none to five, with an

[1] *Survey Report of Chamute, Kansas, School System*, 1924, pp. 53–54.

[2] From Davis, *Junior High School Education*, pp. 324–325. Copyright 1924 by World Book Company, Publishers, Yonkers-on-Hudson, New York.

average of three. In the eighth grade the number varied from none to five with an average of two and one-half. Two of the eleven schools did not require practical arts in the seventh grade and three in the eighth, but these schools offered a variety of elective work in practical arts in these grades, while all the schools offered elective work of this type in the ninth grade.

Try-outs for agricultural occupations. The junior high school work actually given in agriculture differs greatly in try-out values. In one city with a population of 50,000, it consists of textbook and indoor laboratory work, dealing only with plant life. In another city of more than a million population, Los Angeles, both plant and animal life are covered and splendidly equipped gardens are provided as laboratories. The following is a brief description of the eighth-grade work in Los Angeles:

INTRODUCTORY AGRICULTURE

This course is designed primarily for the students in the eighth grade, to familiarize them with the elements of agricultural practice. The study of plant and animal life, their relation to each other and to man, will be carried on through the use of gardens, smaller domestic animals, laboratory exercises, and field excursions.

PLANT PROPAGATION

The object of this course is to familiarize the student with practical methods of propagation and the production of vegetables, berries, and ornamental plants; to study the commercial value and industrial possibilities in their production; and to develop their appreciation of the use of plants for home and public ornamentation.

The course will include individual work in vegetable and ornamental gardening, propagation of flowers, shrubs, trees,

vegetables, and berries, by methods best suited for each. This will be done in the gardens, glass-houses, lath-houses, cloth-houses, hot-beds, and cold frames. Also class work, reference reading, and trips to parks, gardens, nurseries, and markets.

In many four-year high schools and in some senior high schools in smaller cities and towns, agriculture is offered on a vocational preparatory basis, with federal and state aid under the provisions of the Smith-Hughes Act. There were, for example, 161 such high schools in Illinois in 1925–26, 167 in Ohio, 18 in Maine, 75 in California, 105 in North Carolina, and 86 in Oklahoma. Every state has some high schools offering Smith-Hughes courses in agriculture, as they are called, the total number of such schools being 3081 in 1926.[1] For the most part these schools are in comparatively small towns. While it is assumed that pupils entering these courses have already decided upon agriculture as an occupation, many change their minds and go into other lines of work as a result of their experiences in the agriculture course, and a still larger number find this course a means of helping them to decide which branch of agriculture they wish to follow. The material dealing with farm crops, vegetable gardening, horticulture, stock raising, farm management, and poultry raising, including project work each year, is rich in exploratory values. In fact, senior high school agriculture is serving this purpose to a much greater extent than is junior high school agriculture.

Try-outs for business occupations. The place that commercial subjects should occupy in the junior high school has proved very perplexing to educational

[1] *Federal Board for Vocational Education, Annual Report,* 1926, p. 131.

administrators. In some cities, no commercial work is offered in this school; in others, only business practice in the eighth grade, and typing and bookkeeping in the ninth. In still others, typing is offered five hours per week in the seventh and eighth grades with stenography, commercial English, commercial arithmetic, and bookkeeping in the ninth grade. The difference that exists in this matter in different cities is seen when the table on the following page is examined.

In an effort to improve the situation, the Subcommittee on Business Education of the Commission on the Reorganization of Secondary Education, reporting in 1919, made the following comments and recommendations:

"The question has insistently been asked, 'When may commercial education begin?' With the introduction of the junior high school, there has been the temptation to transfer to this school highly specialized instruction in shorthand, typewriting, and bookkeeping. In other words, the custom has been to give a fairly complete technical training by the completion of the ninth or tenth year. The committee regards this tendency as regrettable.

"The committee believes that try-out commercial instruction of a general character may well be given in the seventh and eighth school years. Such a procedure has the double advantage of giving all the pupils some knowledge of commercial affairs, which knowledge will be of value to them no matter what line of work they may later enter upon; and, secondly, it gives the basis for an intelligent choice of school subjects. Any plan which requires pupils at the beginning of the

TABLE SHOWING COMMERCIAL SUBJECTS OFFERED IN TWELVE JUNIOR HIGH SCHOOLS

CITY	7TH GRADE		8TH GRADE		9TH GRADE	
	SUBJECT	PERIODS	SUBJECT	PERIODS	SUBJECT	PERIODS
Duluth			Typing 18 weeks	5	Commercial Arithmetic Bookkeeping Typing Stenography Typing	10 10 10 5 5
Davenport					Bookkeeping	5
St. Louis			Bookkeeping and Spelling	5	Bookkeeping	5
Buffalo			Commercial Subjects	4	Stenography Typing Bookkeeping Office Practice	5 5 4 2
Detroit			Business Practice	5	Bookkeeping Statistics Typing	5 2 2
Kalamazoo			Typing	4	Typing Bookkeeping	10 10
Menominee, Mich.			Business Arithmetic and Bookkeeping	5	Typing and Business English	5
Jackson, Mich.			Business Methods Typing	2 1	Bookkeeping Typing Stenography	5 2½ 5
Pasadena	Typing Penmanship and Spelling	5 5	Typing Penmanship and Spelling Business Arithmetic	5 5 5	Commercial Arithmetic Penmanship and Spelling	5 5
Berkeley (Burbank Jr. High)	Typing		Bookkeeping Typing Stenography		Commercial English Commercial Arithmetic Typing Stenography Bookkeeping	
Des Moines					Business Training and Penmanship	5
Rochester			Typing (18 weeks) First Lessons in Business Mathematics (18 weeks) Commercial Geography (18 weeks)	3½ 4½ 4	Typing Bookkeeping	3 5

seventh or the eighth school year to make a choice of future occupation, that cannot later be easily changed, must work great harm. At this time they have not had the experience, nor have they the knowledge, to choose wisely.

" It is further our opinion that the commercial education of the ninth school year may well be of a somewhat general character, such as giving training in the use of the typewriter, the teaching of the fundamentals of accounts, and such practical applications of general subjects as will serve at once as a foundation for later commercial instruction and be of practical use to those who must leave school at the end of the ninth year."

The committee suggested for the eighth year " First Lessons in Business " including business habits, record work, business forms, systems of filing, taking and executing orders, wrapping and shipping goods, messenger service, work of stock clerks, making change and preparing money for deposit, simple accounts and journal entries, and drill in penmanship. For the ninth year the committee recommended elementary bookkeeping and typewriting.

The fact of the matter seems to be that, in many junior high schools, commercial subjects have been taken over bodily from the traditional four-year high school course without first determining whether they are suited either to the maturity of the pupils or to the purposes of the junior high school. The idea of a try-out in the business field has appealed to school administrators quite as strongly as try-out courses in other fields, and properly so. But it is a mistake to assume that the commercial subjects, as developed to serve

the needs of four-year high school pupils, will serve equally well the needs of junior high school pupils. Certainly, as far as the try-out function of commercial subjects in the junior high school is concerned, the committee's suggestions point in the right direction. Typewriting five periods per week, with penmanship and spelling an equal number of periods, throughout the seventh and eighth grades, followed by commercial arithmetic with more penmanship and spelling in the ninth grade, affords extremely meager exploratory opportunities in the great field of business; yet this constitutes the offerings of a junior high school in a city of 45,000 population. What is needed for try-out purposes, and for any other purposes except those of vocational education, which cannot be justified for the business field in this period of education, is a much more general course which brings contact with several lines of business activity. The whole program of commercial studies in junior high schools needs to be made over with genuine consideration for the exploratory function.

In the senior high school period, commercial work, like agriculture, is offered largely as vocational preparation, though in an investigation of ninety Michigan schools, exclusive of Detroit, it was found that the general education purpose held first place nearly as often as vocational preparation in the minds of those who had charge of the commercial subjects. Bookkeeping, typewriting, stenography, commercial arithmetic, commercial law, commercial geography, business English, filing, comptometer and adding machine operating, and salesmanship are the subjects most often included, with

nearly all of the time given to typewriting, stenography, and bookkeeping.

The proportion of pupils in the senior high school period who take commercial subjects is large in most schools. The Quinquennial Report of the Commission on Secondary Schools of the North Central Association covering 1577 public high schools with an enrollment of 678,935, shows that 309,395, or 45.6 per cent, were taking commercial subjects in the first semester of 1924–25. No other group of elective subjects had so many students enrolled. The number in all foreign languages combined was 290,985, and in all the sciences combined was 295,044. Only in the English, mathematics, and social science groups, where much of the work is required, was the number of enrollments larger than in the commercial group.

Even though most of the commercial work of the senior high school period has either a general education purpose or a definite vocational preparation purpose, based on the assumption that those who are taking it have already decided to enter the business field, nevertheless it has important exploratory values for many pupils, especially for those who have not already taken similar work for try-out purposes in the junior high school. Some are turned away from business careers by the sample obtained; many others are helped to decide between general office work, clerical work, accounting, retail selling, and the like; and still others catch a vision of the larger possibilities in business for which college preparation in business administration is desirable. High school principals and commercial teachers should recognize more fully the exploratory

value of all this work and see that it is supplemented by information concerning business occupations, as was discussed in the previous chapter.

Try-outs through household arts courses. In household arts subjects as presented in most junior and senior high schools little attention is paid to their value for vocational exploratory purposes. Most educators agree that these subjects deserve an important place in the program of secondary education, but the purposes usually stressed are to round out the general education of girls and to prepare them for the responsibilities of their present and future homes. The subcommittee on Home Economics of the Commission on the Reorganization of Secondary Education in an unpublished report dated February 1920, stated the aims of the general home economics course in elementary and high schools as follows:[1]

"To prepare the pupils for helpful and worthy membership in their present homes. To accomplish this aim it is necessary to develop skill in the use of household materials, utensils, and machinery, to inculcate such personal habits and standards as to food, clothing, and surroundings as will insure good physical health; to train to thrift, economy, and business methods in the problems confronting the administrator of the family income; to apply to daily life the fundamental laws of beauty of color, line, and form; and to establish such standards of character as will result in consideration for the comfort and convenience of others and in willing service for the common good."

This committee proposed the following course for the

[1] From Davis, *Junior High School Education*, pp. 247–249. Copyright 1924 by World Book Company, Publishers, Yonkers-on-Hudson, New York.

junior high school grades, stressing throughout school projects, home projects, and assignment of topics for investigation, report, and discussion:

SEVENTH GRADE

First quarter. Topic: The care of clothing; thrift in selecting and making, correlated with English, geography, arithmetic, art, and general science.

Second and third quarters. Topic: Meal preparation and service, correlated with English, geography, arithmetic, hygiene, and general science.

Fourth quarter. Topic: The choice and making of simple clothing, correlated with arithmetic, bookkeeping, general science, art, and hygiene.

EIGHTH GRADE

First and second quarters. Topic: Food preservation, marketing, food stuff, and food accounts.

Third quarter. Topic: Economy in the use of clothing. Study of costs.

Fourth quarter. Topic: (1) Summer clothing, its use and care. (2) Garments for infants, home nursing, and care of little children during summer.

NINTH GRADE: SURVEY COURSE

First quarter. Topic: Clothing studies in relation to healthful and economic living.

Second quarter. Topic: Food studies in relation to healthful and economic living.

Third quarter. Topic: The home and its care. Studies dealing with making the living place a healthful, attractive home wherever it may be.

Fourth quarter. Topic: Family and personal finances. Wise and thoughtful spending and saving.

An examination of the courses outlined above and of the offerings in this line by many secondary schools

shows that while no particular attention has been given to the exploratory aim in framing household arts courses, nevertheless these have considerable try-out or exploratory value. In the junior and senior high schools combined, girls have an opportunity to obtain experience that should help them to a greater or less extent in deciding whether they wish to become wage earners as waitresses, cooks, café or cafeteria managers, seamstresses, milliners, designers in the fields of dress or home decoration, dietitians, or nurses. However, the experiences provided in some of these occupations are very limited. Moreover, little or no effort is usually made to supplement these meager experiences with information concerning the occupations represented which would be helpful in making a choice. It is noteworthy also that the range of occupations is narrow though it does contain some in which large numbers of women are employed. It must be admitted, therefore, that household arts, as usually taught, does not function in a large way as vocational exploratory experiences.

Try-out courses for industrial occupations. Industrial arts is the first subject which comes to mind when vocational exploratory courses in the junior high school are mentioned. It was probably in connection with this subject that the terms exploratory and try-out as applied to school courses were first used. Certainly they have been used most often in this connection, and more attention has been given to organizing the material of industrial arts for try-out purposes than has been given to organizing any other subject for these purposes.

It must not, however, be assumed that no other purpose is served by industrial arts in the junior high school. Properly organized and presented, this subject, in addition to providing try-out experiences, makes important contributions to general education. Indeed many who are engaged in educational work rate these other values as of higher importance. This is shown by Edgerton's [1] investigation from which the following table is taken:

MAIN REASONS FOR OFFERING INDUSTRIAL ACTIVITIES IN EACH OF 303 JUNIOR HIGH SCHOOLS

CHIEF EMPHASIS AND CLAIMS	NO. SCHOOLS	PER CENT
I Contributing to the general experience, all-round development, and industrial intelligence	118	39
II Aiding in the intelligent selection of industrial occupations without encouraging early choices	101	33
III Enriching the school experiences of the pupils through concrete situations	78	26
IV Preparing for entrance into industrial vocations	6	2

It has been seen that nearly all junior high schools either require some work in industrial arts or offer the subject as an elective. In order to estimate the value of this work for try-out purposes, it is necessary that the offerings of several schools be noted with some care. The following offerings are typical:

[1] Edgerton, A. H. — *Twenty-third Yearbook, National Society for the Study of Education*, Part II, p. 206.

ROCHESTER, NEW YORK

Population in 1920, 295,750.

"There are two try-out shops. One is a general utility shop with a limited equipment for woodworking, sheet-metal, concrete, and electricity. Boys entering the 7th *B* grade in the Junior high school receive instruction in this shop. For boys in the 7th *A* grade, an elementary machine shop, equipped with light metal-working machines, is provided. To boys who are about to make a choice of curriculum, these two 7th-grade try-out shops offer a means of familiarizing them with hand processes in wood, metal, and other materials. The experience thus gained helps pupils to understand the opportunities offered in the technical or the industrial curriculum, and so enables them to choose wisely when they elect a curriculum at the beginning of the 8th grade. The types of shops for 8th- and 9th-grade boys cover the woodworking, metal, and electrical trades, as well as graphic and commercial arts." [1]

WICHITA, KANSAS

Population in 1920, 72,217

In the seventh grade, woodwork only is taught with such projects as book ends, bird house, plant stand, step ladder, hall rack, and the like. In the eighth grade, more woodwork, with projects involving the mortise and tenon joint, is given and some shoe repairing and sheet metal work are offered. The ninth-grade work includes practical electricity and more woodwork which has the making of furniture for the home as its principal projects.

MENOMINEE, MICHIGAN

Population in 1920, 8907

All boys physically able are required to take industrial arts in grades 7, 8, and 9. "The work of the seventh grade is divided equally between four lines of effort: drawing, woodshop, ele-

[1] *The Junior High Schools of Rochester, N. Y.*, pp. 103–104.

mentary iron work, and printing. In the eighth grade the boy receives equal parts of drawing, woodshop, electrical construction, and printing. In the ninth grade, his time is divided: one-half woodshop, one-third drawing, and one-sixth forge practice."

KALAMAZOO, MICHIGAN

Population in 1920, 48,487

Manual training is required in grade seven and may be elected in grades eight and nine. Seventh and eighth grade work is altogether bench woodwork, including such projects as plant stand, sleeve board, tool rack, knife-and-fork box, footstools, sled, coat and pant hanger, drawing board, sliding book-rack, telephone stand, etc. In the ninth grade, cabinet making and wood turning are offered. Mechanical drawing begins in the eighth grade.

DETROIT, MICHIGAN

Population in 1920, 993,468

All seventh-grade boys in intermediate schools are required to take a " household mechanics " course which includes woodwork, plumbing, electrical appliances. In the eighth grade, those who elect the technical course take four shop subjects, each for a period of ten weeks. Machine shop, pattern shop, electrical work, automechanics, and printing are offered. The try-out purpose of these courses is further emphasized in the ninth-grade technical course.

Examination of these courses shows that they are of two distinct types. One type consists chiefly of woodwork with mechanical drawing — the traditional manual training course for grades seven, eight, and nine when grades seven and eight were part of the elementary school and grade nine was the first year of high school. The other type consists of general shop work, sometimes under the name of household mechan-

ics or home mechanics, followed by short units of work nine or ten weeks in length in four or more shops representing quite distinct trades. The general shop course usually includes experiences in wood, metal, sheet metal, plumbing, mechanical drawing, and electrical work, especially in relation to upkeep of the modern home. The shop courses that follow the general course go into some of these same subjects, and perhaps printing or automobile upkeep, somewhat more extensively. Nor does the size of the city determine which of the two types of work are offered, as will be noted from the illustrations given above.

It is clear that the manual-training type of course, even under the best conditions as to teaching and equipment, is extremely meager in try-out values. It gives the boys samples of two or three wood-working trades and draughting only. The second type of course is immensely more valuable for try-out purposes because it covers a much wider range of occupations and also because the occupations covered provide employment for large numbers of workers. The second type of course is much more valuable than the first also for the reason that it tests far more effectively mechanical aptitudes and interests as contrasted with aptitudes and interests in other fields such as business or the professions. Indeed the ordinary manual-training course in woodwork affords pitifully poor exploratory experiences for the field of the building trades, to say nothing of the metal and printing trades.

Industrial try-out courses in the small schools. It is sometimes argued that the small junior high school cannot provide such varied work in industrial arts as is

included in the second type of course; that the cost of equipment is prohibitive; and that the necessary number of shop teachers cannot be afforded. However, the cost of equipment for a good general shop need not be any greater than that of the ordinary manual-training shop which offers only wood work. A school that is large enough to equip and maintain a manual-training shop and a mechanical-drawing room can just as well equip, with little if any greater expense, a general shop and a shop in which four try-out courses can be taught. And the same number of teachers, if they are of the right sort, will do the work. In fact, one shop teacher who has had the proper training and possesses the other desirable qualifications can take care of both shops if the school is small enough to require this. Rodgers,[1] in discussing this type of try-out work in the junior high school, presents the following plan for small schools:

"For a small city with two shops:

"SEVENTH GRADE: Home mechanics with its accompanying related problems and general vocational guidance instruction that will provide an overlook of all occupations.

"EIGHTH GRADE AND NINTH GRADE: Instruction in selected building and metal trades or in other combinations in a composite shop, with its accompanying work in related problems and the vocational guidance information pertaining to the entire group."

"For a small community with one shop:

"SEVENTH, EIGHTH AND NINTH GRADES: Instruction in selected building and metal trades or in other combinations in a composite shop under the conditions stated above."

[1] Rodgers, Robert H. — "Guidance Possibilities Through Exploratory Activities," *Monograph No. 2*, 1925 series. The Vocational Education Association of the Middle West.

Special aspects of industrial try-out problems in senior high school. In the senior high school, the problem of try-out courses for the industries is quite different. As seen in an earlier chapter a large percentage of the boys and girls have left school. Those who have gone will become, in the main, industrial workers and business workers in minor positions. From those who remain will be filled most of the more important business positions, as well as the positions of a technical and executive nature in the industrial field.

Another feature of the problem is the fact that many of those who take industrial subjects in the senior high school are supposed to do so with a vocational preparation purpose, on the assumption that a definite choice of occupation, or at least a choice within a comparatively narrow field such as engineering, was made in the junior high school. To be sure, vocational preparatory courses, as was pointed out in discussing agricultural and commercial subjects, often have high try-out values. Many a boy's choice has been confirmed and many another's changed by his experiences in senior high school electricity, or machine shop work, or auto-mechanics work. It is a serious question, however, whether there may not well be offered in senior high school an industrial course of more general character in which the try-out purpose is prominent. If offered, such a course properly would come in the tenth grade, though it might be extended into the eleventh grade. Naturally it would be quite different from the general shop course of the junior high school and would stress technical and minor executive aspects of industry as well as trade process aspects. The presumption would

be that many of the boys had had the junior high school course, though it might be open also to those who had not. A course somewhat of this character has been attempted in Detroit.

There can be no question that much of the shop work now given in the senior high school years functions very poorly either for vocational preparation or vocational try-out purposes. Nor does it make much of a contribution to the general education of the student. Possibly a tenth-grade course for try-out purposes, with emphasis upon the technical and minor executive aspects of industry, followed by definitely vocational work in the later grades, may be the best solution of the difficulties which now surround senior high school shop courses.

Limited number of occupations for which exploratory courses are provided. From this examination of the offerings of junior and senior high schools in agriculture, business, household arts, and industrial arts, it appears that the number of occupations for which try-out experiences are provided is very small in comparison with the total number at which men and women are employed. Payne [1] calls attention to this in striking manner, stating that there are 17,000 occupations in New York City, while the junior high schools of that city are providing try-out courses in only eight of these. But the situation is not nearly so hopeless as Payne seems to think. In the first place, courses of this type provide try-out experiences for broad fields of employment. Where the proper courses are offered, it is possible for a boy to determine by exploration whether his interests and

[1] Payne, A. F. — *Industrial Arts Magazine*, May, 1925, pp. 168–170.

aptitudes lie in the field of agriculture, business, or industry; and if in industry, whether in the metal trades, building, electrical, or printing trades. In addition, it is often possible for him to obtain some experience in more than one trade belonging to the field of his particular interest. In the second place, the specific occupations represented in the try-out courses are, or should be, those in which large numbers of people are employed. Undoubtedly it is true, as Payne maintains, that important occupations are not represented in the try-out courses provided by the schools of New York City. On the other hand, it is true also that the great majority of his 17,000 occupations are relatively unimportant as far as number of workers is concerned. It is quite possible that as many people are employed in one hundred of these occupations as in the other 16,900. So, while it must be granted that the range of try-outs is still very inadequate, particularly in business and household arts courses, it must be granted also that valuable work is done through the courses already provided.

Possibility of try-out courses for the professions. In what has been said thus far, try-out courses for the professions have not been mentioned. Obviously providing in high school try-out experiences in medicine or dentistry, for example, is quite a different matter from providing try-out experiences in the trades. The large body of technical knowledge upon which the practice of any profession depends is perhaps the most serious obstacle, aside from the fact that human material is not so readily available as wood and metal for experimental purposes. And yet it is quite conceivable that a sufficient number of the more elementary

experiences of any profession might be brought together to form a fairly good try-out course for senior high school students. In law, a moot court might be used to advantage, with a variety of legal experiences organized around it. In medicine and nursing, the health inspection work and in dentistry the dental clinic work of the school system might serve as centers around which observation and other experiences would be organized. Other professions would lend themselves to this plan quite as readily as those mentioned. To be sure, work of this character would need to be supplemented with occupational information material concerning each profession as the class participates in its observation and experiences. For example, study of the requirements of the legal profession and trips to real courts and to real lawyers' offices should accompany the school work organized around the moot court.

As far as the writer knows, no high school has yet organized try-out courses for the professions, though some principals have maintained that it is quite as logical a thing to do as to give these courses for the trades, and high school pupils have asked that it be done. It is to be hoped that some venturesome soul, who is at the same time wise and capable, will undertake this difficult task in the near future. In the meantime we shall have to be content with what the academic and scientific subjects of the curriculum contribute. In the hands of teachers who are alive to their opportunities, this contribution may be of greater value than is usually realized.

Need for measuring the effectiveness of try-out courses. Every course that is offered with a try-out

purpose needs to be subjected occasionally to the closest scrutiny in order to make sure that it is actually performing this function effectively. Undoubtedly an enormous amount of time is wasted annually in the schools of the United States in so-called try-out courses. The reason for lack of effectiveness may be poor selection of material, poor organization of material, or poor teaching. In some cases it is all three of these. Unfortunately no method has yet been developed for measuring the effectiveness of courses that are offered as vocational try-outs. It has been taken for granted that a course which had this as one of its announced purposes was making good. Many a junior high school assumes that its boys and girls are obtaining a try-out service from courses that simply do not function in this respect, or function very imperfectly. It is high time that these courses were called to account. But there is no objective standard for judging their worth. Occasionally a statement from industry is illuminating, such as that made by Mr. Hoyt,[1] Associate Supervisor of Training in the R. R. Donnelly and Sons Company of Chicago, when he said, " Boys brought to us by printing teachers are vocationally 'set' nine times out of ten. Their course in printing in the school has been truly a 'finding' course." However, very few employers are able to make such a statement. A few principals, directors, and supervisors form subjective judgments of the effectiveness of try-out courses on the basis of their observation. But what is needed is a set

[1] Hoyt, G. M. — "Vocational Guidance from the Point of View of Industry," *Monograph No. 2*, 1925 Series. The Vocational Education Association of the Middle West.

of criteria as to content, organization, and methods of teaching to be used as standards in judging the value of a try-out course; or some kind of a set of standardized objective tests to be given the pupils in order to measure results of courses given for this purpose. A record of such results would be of value in counseling individual pupils as well as in determining whether the try-out course is really functioning.

However, pending the development of suitable criteria and standardized objective tests, try-out courses could be made of much greater value in a guidance program if the teachers of these courses would file for the counselor's use more complete reports concerning their pupils. At present the report usually consists of nothing more than a grade at the end of the semester. The teacher might well be called upon to report his opinion of the pupil's fitness for the occupation or occupations for which the course is considered exploratory with his reasons for this opinion. He might be expected to submit a statement as to the intensity of the pupil's interest in the course as a whole and in particular parts of it; as to his initiative and resourcefulness in attacking new problems as they come up; as to his industry, thoroughness, orderliness; and as to any outstanding temperamental or emotional characteristics. A teacher in this group of subjects usually has a much better opportunity to discover certain important qualities of a pupil than does the average teacher of academic subjects.

Vocational exploration by means of extracurricular activities. In practically all junior and senior high schools, vocational try-out experiences are available to

boys and girls through extracurricular activities such as the school paper, dramatic and debating societies, work in the school cafeteria, and clubs of various sorts. Seldom is the try-out purpose prominent, or even present, in the minds of the organizers of these activities, but this purpose is served by these activities for many a high school boy or girl, nevertheless. For example, newspaper careers, both on the news gathering and editorial side and on the business side, have been started by work on the high school paper. Some schools have undertaken to organize their entire student body into clubs, the individual's interests and hobbies determining the club to which he belongs. Notable among these is the Washington Junior High School, Rochester, New York, with more than sixty clubs. The following statement is taken from a bulletin entitled " Clubs " published by the school:

" The club system aims to provide for every kind of activity. For some children it is interest in wireless; for many browsing around a book shelf or collecting stamps; for others exchanging bits of camp lore; for still others excursions into the woods for birds or flowers. After three years it is difficult to conceive of a boy or girl who has not developed an enthusiasm for some hobby.

" Clubs are intrinsically avocational, distinct in spirit from ordinary school work. But in many instances they offer further field for exploration and become vocational. More than one boy has caught a vision that revolutionized his plans for life work. Often a latent talent whose existence might never have been detected is brought to light. A lad, who intended to leave school at the end of the eighth grade, spent one

term in the Landscape Gardening Club and thereupon planned for high school; another of supposedly ordinary ability, exhibited through the Pottery Club an apparent native skill in sculpturing.

"Since the corner stone of the junior high school is justice for the individual, every student must be given an equal chance adapted to his abilities and aptitudes. In the club this doctrine of individual justice is emphasized. The students themselves elect a club in accordance with their own ideas, each one choosing the thing he likes best. 'And no one shall work for money, and no one shall work for fame, but each for the joy of working . . .'

"School clubs in some ways resemble the informal education of old Greece where the master was one with his pupils who clustered about him in small groups and, with a common interest at heart, developed wisdom and character. The modern ideal, however, is not limited in its scope, but embraces all activities of life. On Friday morning from eleven to eleven-fifty, Washington Junior High School presents the unique picture of eighteen hundred boys and girls engaged in the pursuit of happiness, each in his own way."

Koos [1], in a summary of the general literature on extracurricular activities, gives a list of those mentioned at least twice in forty recent publications (mostly magazine articles) dealing with this subject. In all, 145 different organizations or activities are included in the list. Leaving out the foreign language, historical, geographical, mathematical, physical and athletic, civic-

[1] Koos, L. V. — *Twenty-fifth Yearbook of the National Society for the Study of Education*, pp. 21–22.

social, moral, and miscellaneous, we have the following activities in Koos' list, many of which have, or may have, important exploratory values:

LITERATURE

English Clubs
Literary Societies
Library Clubs
Booklovers Clubs
Reading Clubs
Mythology Clubs
Short Story Clubs

FORENSIC AND DECLAMATORY

Debate
Debating Societies
Discussion Clubs
Story-Telling Clubs
Declamation Clubs
Public Speaking Clubs
Oratory Clubs

JOURNALISTIC

Journalism or Publications
Editorial Staffs
Writers' Clubs
Press Associations or Clubs
School Papers
Magazines
Annuals

MUSICAL

Musical Organizations
Chorus
Choral Clubs
Glee Clubs
Boys' Glee Clubs
Girls' Glee Clubs

DRAMATIC

Dramatics
Dramatic Clubs
Plays
Class Plays
Motion Picture or Scenario Clubs

SCIENTIFIC

Science Clubs
Biology Clubs
Botany Clubs
Nature Study
Bird Clubs
Wildflower Clubs
Chemistry Clubs
Electrical Clubs
Astronomy Clubs
Radio Clubs
Wireless Clubs

INDUSTRIAL

Industrial Arts Clubs
Aircraft Clubs
Agriculture Clubs
Gardening Clubs

HOME ECONOMICS

Home Economics Clubs
Cooking Clubs
Luncheon Activities
Sewing Clubs
Millinery Clubs

MUSICAL (*Cont'd*)

Orchestras
Bands
Mandolin Clubs
Instrumental Clubs
Music Clubs
Music Appreciation Clubs

ARTS AND CRAFTS

Art Clubs
Sketch Clubs
Poster Clubs
Cartoon Clubs
Illustration Clubs
Camera Clubs
Handicraft Clubs
Basketry Clubs
Pottery Clubs
Gift Clubs

HOME ECONOMICS (*Cont'd*)

Needlecraft Clubs
Crochet Clubs
Embroidery Clubs
Knitting Clubs
Laundry Clubs
Home Nursing Clubs

COMMERCIAL

Commercial Clubs
Typewriting Clubs
Penmanship Clubs

Not only does participation in many of these activities furnish valuable try-out experiences, but management of athletic teams, class organizations, school publications, plays, and the like afford business try-outs of importance.

It will be seen that many of these clubs offer opportunities for exploring vocational interests and aptitudes. Possibility of changing from one club to another under certain conditions is, of course, desirable. There is, moreover, the possibility of increasing the number of clubs that appeal to vocational interests and of supplementing the actual work done with information concerning occupational opportunities. Indeed, some high schools have developed "life-career clubs" the definite purpose of which is to study the requirements, opportunities, etc., of vocations. How-

ever, these life-career clubs usually do not provide try-out experiences but information.

Vocational exploration through vacation and after-school employment. The possibilities of try-out experiences outside the school for high school pupils have had but little attention as yet on the part of school authorities. In discussing these possibilities, it is well to note that a considerable percentage of boys and a smaller percentage of girls are engaged in some kind of employment outside school hours. Part of these work Saturdays and Sundays, while many work after three or four o'clock on school days and Saturdays as well. It should be noted, also, that a large percentage of high school boys and girls spend their summer vacations in some kind of employment.

The extent of after-school and Saturday work by high school pupils has been a subject of investigation in several cities. Longworth[1] found that in the Jefferson Intermediate School of Detroit, 48.8 per cent of the 742 boys enrolled were employed in part-time work, while 8.5 per cent of the girls were so employed.

With large numbers of boys and girls while still in school engaging to some extent in the actual work of business and industry, it is evident that very many occupational choices must be determined by these out-of-school experiences. Here is genuine try-out work for high school pupils on a large scale.

Need for supervision of employment during vacations and after school. The difficulty is that part-time and

[1] Longworth, J. Glen. "Some Significant Excerpts from a Study of Part-time Employment of Intermediate School Children," *School Review*, Vol. XXXIV, No. 3, March, 1926.

vacation employment is almost wholly haphazard, undirected try-out work. The boy who works after school or Saturdays or during summer vacations is even less concerned about what the job has in it for him, aside from wages, than is the one who is leaving school for full-time employment; and the latter's failure to look ahead has been noted earlier. What interests this pupil-worker is a job and one that pays well. It matters little to him whether the job is a good one to test his interests and aptitudes. To be sure, some of the work that is done by these pupil-workers is juvenile and has little try-out value for permanent occupations. On the other hand much of the work affords the finest kind of try-out experiences. But as far as try-out values are concerned, there is no object in a boy working at a job which he knows in advance is far removed from what he will do as a man. And very many do just this in summer vacations and out of school hours.

The way out of the difficulty seems to lie in some sort of school supervision of pupil employment. That supervision is needed for other reasons is seen from such studies as Longworth's which shows that 23.2 per cent of the junior high school pupils who were employed were working more than 18 hours per week in addition to their 30 hours of school work, while 12.2 per cent of those employed were actually spending more time at work than in the school. Instead of letting each pupil find his own job, the school, with its knowledge of the interests and aptitudes of individual pupils, might attempt to place those who need out-of-school employment in jobs where valuable tests of these interests and aptitudes would be obtained. This would be a big

undertaking to be sure, when summer employment as well as after-school employment is taken into account, but it would take advantage of a wonderful opportunity to provide the best type of vocational exploration for many high school pupils, and at the same time guard against excessive hours of employment for them.

Exploration through coöperative part-time courses. Certain school systems have developed a type of school work which involves part-time employment of some of its high school pupils. This type of work, usually known as a coöperative high school course for the reason that it involves coöperation between school and employer, while planned for vocational preparation purposes, provides also valuable try-out experiences under the actual conditions of industry or business.

In the coöperative high school course, which grew out of the coöperative engineering course established twenty years ago by Dean Schneider at the University of Cincinnati, a pupil spends one-half of his time in school and the other half in employment at an occupation which he expects to follow permanently. After a week or two in school, he spends an equal amount of time at work, returning then to school, and so on throughout the school year. Usually he spends his summer vacation, or a good part of it, on the job. Variations of this plan have been worked out in retail selling, whereby pupils spend one or two days a week in department or other stores and the remainder of the time in school. In all cases, the school work is supposed to deal to a great extent with the theory and the related science or other matter of the occupation, and a representative of the school has a certain amount of supervision over the employment.

While the pupil enters this course with his choice of occupation made, nevertheless the first few months of work serve either to confirm that choice or to convince him that he has made a mistake. If he feels that a mistake has been made or if the representative of the school who looks after his employment comes to this conclusion, the two go over the matter together and decide upon some other occupation. Such changes are quite common under this plan. Indeed, it is an important feature of the plan that these changes should be made before a long period of training has been carried on and before full-time employment is begun.

Administrative and other difficulties have prevented the coöperative part-time plan from gaining very general acceptance, but there can be no question that it has important exploratory possibilities. Perhaps it may come to be used to provide try-out experiences for those occupations which do not employ enough workers to justify their inclusion in the school curriculum.

Limitations of occupational exploratory experiences for school pupils. There are, to be sure, important limitations upon try-out experiences provided by the school. It has already been noted that experiences of this character now offered cover a comparatively narrow range of occupations. Difficulties in the way of extending the range, either within the school or outside it, under school supervision have been noted also. It is true, moreover, that actual conditions of employment as to hours of work, necessity for production, social environment, etc., are not reproduced in the school try-out work. On this account there are some pupils to whom the work of a try-out course appeals who find

themselves unsuited to the same work under the actual conditions of industry or business. Then there is the difficulty of obtaining teachers who are technically well prepared to do this kind of teaching; and the further difficulty that few of those who have the technical preparation have anything like an adequate conception of the try-out function of their work. And many difficulties are encountered when one undertakes to provide exploratory experiences for pupils by placing them in part-time, after-school, or vacation employment. Most junior high school pupils are too young to be placed in work that provides valuable try-out experiences. Many employers will not be bothered with part-time or vacation workers of any age if they can help it. Even senior high school pupils find that few of the summer jobs open to them are in occupations that offer permanent attractions to them. Other limitations and difficulties might be mentioned.

Yet, notwithstanding these limitations and difficulties, try-out experiences in the high school period such as have been discussed in this chapter already are performing a large service in assisting boys and girls in choosing occupations.

Not only have the various kinds of try-out work discussed justified their place in the schools; they have pointed the way also to a much larger service in the future when a better understanding prevails of the high school's responsibility for providing adequate vocational exploratory opportunities to its pupils and of how this can be done more effectively. Predictions are always unsafe but present indications point to extensive developments in this type of work in the next few years.

There is nothing quite like experience in helping one decide whether or not he will like an occupation. Since the experience is sure to be more genuine if obtained under actual conditions of business or industry than if obtained in the school, it is probable that much of the development will be in try-out experiences provided outside the school but arranged for and supervised by the school. We may expect that try-out experiences will be supplemented more and more by tests of special aptitudes as these tests develop and are made more practicable for school use. But there seems little likelihood that special aptitude tests, important as they are likely to become, will ever take the place of try-out experiences in a program of vocational guidance.

QUESTIONS AND EXERCISES

1. On what grounds do writers on the junior high school justify emphasis upon the try-out or exploratory function of education in the junior high school period?

2. Give illustrations of exploratory courses in the junior high school period provided (*a*) primarily or largely for vocational guidance purposes and (*b*) primarily or largely for educational guidance purposes.

3. What does Briggs mean when he insists that the material used for exploratory purposes, the subject matter of exploratory courses, shall be in itself worth while? Give illustrations in support of your answer.

4. Take the program of studies of a typical junior high school, preferably in your own city or state, and make a list of the occupations for which fairly definite exploratory experiences are provided in the courses offered.

5. In which of the three groups of subjects, commercial, industrial arts, or household arts, is the exploratory purpose most stressed? How do you account for this?

6. What is a general shop course? Is it practicable in a community of 5000 population? How does it compare in vocational exploratory values with the traditional manual-training course consisting only of woodwork and drawing?

7. State the principal factors which make the problem of providing vocational exploratory courses in the senior high school differ from that of providing them in the junior high school.

8. What are some of the principal difficulties in the way of determining the effectiveness of vocational exploratory courses? Can you think of ways in which these difficulties might be overcome?

9. Prepare a report form which it is practicable for a teacher of an exploratory course to fill out and file concerning each of his pupils.

10. Make a list of the extracurricular activities which provide vocational exploratory experiences in some junior or senior high school of your community. Check those which you think are the most valuable in this respect.

11. James Wilson is a senior in high school in a large city. For three years he has thought he would like to be an architect. He has done well in his high-school drawing. Ever since entering high school he has worked after school, on Saturdays, and during vacations in a grocery store near his home because this was the first job he could find and the grocer liked him. Ought the school system to have made any efforts to aid James in obtaining vacation and after-school employment in an architect's office? Give reasons for your answer. Is it practicable for the school system to perform this service for large numbers of pupils?

12. Compare the limitations and advantages of the three methods of providing vocational exploratory experiences: (*a*) by means of courses; (*b*) by means of extracurricular activities; (*c*) by means of part-time and vacation employment while still in school.

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CHAPTER VII

INDIVIDUAL COUNSELING IN JUNIOR AND SENIOR HIGH SCHOOLS

The oldest form of vocational guidance in the school is individual counseling. Wherever the relationship of teacher and pupil exists there is found a setting for questions and advice concerning the pupil's future occupation. And often throughout the history of organized education, this setting has resulted in the teacher giving the pupil definite counsel as to his career. Especially has this been true in case of pupils in the period of adolescence. And the head of the school even more than class teachers has felt called upon occasionally to give vocational advice to individual pupils.

Counseling haphazard and unscientific in the past. Nevertheless, comparatively few men and women today can trace their choices of occupation to the influence of a teacher's or principal's advice or help. On the one hand many, probably a great majority of those who make up the adult population of today, never received vocational counsel from teacher or principal. Only a pupil now and then, when conditions were favorable, has had this experience in past decades. Individual counseling has been unsystematic and unplanned. On the other hand, such counsel as was given was unscientific in character, often colored by prejudice, and nearly always based upon

meager knowledge of occupations and of the qualities and special aptitudes of the one counseled.

Efforts to make counseling a regular school function. In the last few years efforts have been made in many city school systems to organize vocational counseling in a more scientific manner. In all parts of the country will be found junior high schools, senior high schools, and four-year high schools in which one or more members of the staff are known as vocational counselors.

In some of the larger schools, for example, in several of the intermediate schools of Detroit, a man gives his entire time to this work for the boys, and a woman, for the girls. In other schools a single counselor serves the entire school, while in still others one or more teachers divide their time between teaching a regular school subject and counseling. The writer found in 1926 that of the 113 cities having a population of 50,000 or more from which data were received, forty-two reported vocational counselors in their high school, but in only fifteen of these cities did the counselors devote their time wholly to guidance work. Chicago had thirteen full-time trained advisers in regular high schools and five in junior high schools; and in addition there were ten high schools in which this work was done by teachers who were scheduled for one to four hours of counseling per day. Detroit had nine full-time counselors in junior high schools, besides nine in junior high and twenty in senior high schools who gave a considerable part of their time to other duties. In Providence, twenty-two teachers, mostly teachers of social studies, devote forty per cent of their time to individual and group guidance. In Oakland, twenty-eight teachers and vice-

principals in senior high schools and seventeen teachers in junior high schools spend part of their time in vocational counseling work. In the junior high schools of Baltimore there are seven counselors who teach classes in " occupations " in addition to counseling, besides one full-time and three part-time counselors in senior high schools. San Francisco has a dean of boys and a dean of girls in each high school and a vice-principal in each junior high school who have responsibility for vocational counseling, along with many other duties. Jersey City has one full-time counselor for the entire city, with its two high schools and one junior high school. In Altoona one of the two part-time high school counselors also has charge of student activities. In Berkeley there are six vocational counselors in the senior high school, one full-time and five half-time, while in the four junior high schools there are five counselors who teach half-time.

While less than 40 per cent of the school systems of the larger cities from which replies to the inquiry were received report definite provision for vocational counseling, and less than 15 per cent report full-time counselors, and while the great majority of counselors have had little if any special preparation for their work, the present tendency undoubtedly is in the direction of providing one or more trained vocational counselors in all secondary schools. These officers will be called upon to perform other duties of various kinds, but the work which gives them the name of counselors will claim most of their time and will consist of individual conferences with pupils on matters pertaining to their vocational choices.

Counseling program should reach all pupils. In order that a program of individual counseling in a high school may be comprehensive, it must reach all pupils in the school. It is not sufficient to make the counselor's services available to all who wish to consult him. It is necessary to require that all come to him for individual interviews just as they are required to take English or history. In the case of some pupils, a single interview may be all that is necessary during the entire junior or senior high school period. The vocational choices of these may appear to the counselor entirely suitable, their plans for preparation wisely made, and their progress satisfactory. Even these, however, are entitled to the services of the school's specialist in vocational counseling long enough to find out whether choice and plans and progress are, or appear to be, suitable. In case of other pupils who have made no choices or whose choices appear unwise several conferences may be necessary. Most pupils will need at least two interviews with the counselor during the junior high school period, one during the first year as they are choosing their curriculum and another during the last year as they look forward to senior high school or employment.

Scheduling individual interviews. It is apparent that a counselor who is to do so much interviewing of individual pupils will find it necessary to make out a schedule of appointments in advance, with a maximum time for each interview, and arrange for pupils to see him according to this schedule. Naturally the interviews, if possible, would be scheduled when pupils have study periods or at other times when interference with class work would be least serious. But a counselor should

have the privilege of scheduling appointments with pupils at times when they are due in English or mathematics or any other subject if necessary, notifying the teacher in advance of the arrangement. The counselor's position in the school and his relations with teachers should make this possible without friction. A thirty-minute maximum should be adequate for interviews, and some counselors may prefer less time than this. If the full time is not required, the remainder may be spent in recording important items that come out of the interview or in preparing for the next interview. If a counselor spends three hours per school day on half-hour appointments, he will be able to conduct thirty interviews per week and between one thousand and twelve hundred per year. Allowing one half of his time for other duties, including teaching one or two classes in occupational information, a counselor could thus do individual counseling for eight or nine hundred pupils. This is with the understanding that many of the seventh- and ninth-grade pupils would require only one interview, many of the eighth-grade pupils no interview, and some from each grade two or more interviews during the year. Certainly if a school is larger than nine hundred, two counselors should be provided, preferably a man for the boys and a woman for the girls. It would be much better for a counselor to be responsible for six hundred or even fewer. In large schools each counselor should have one of the younger teachers who has taken some training for counseling as an understudy. In addition to full-time or nearly full-time teaching the understudy would assist the counselor and, at the same time, further prepare himself for a counselor's position.

Provision should be made by the counselor for voluntary interviews with pupils during the first hour after school each day. In addition, the counselor should keep his office open one evening each week for voluntary interviews with former pupils who are employed.

The setting of the interview. It is important that the counseling interview shall have a setting that will give the pupil who comes for his first interview a favorable impression. This calls for a private office in which the counselor may talk with a pupil without interruption. It calls for an office that is orderly, well kept, and businesslike in appearance and for a cordial and friendly but businesslike attitude on the part of the counselor.

Preparing for the interview. The wise counselor will, of course, make special preparation in advance for each interview by looking up all the pertinent information available concerning the pupil who is scheduled to see him. This information should be on record cards in his office in readily accessible form. The records should include data concerning the size of the family, whether the father and mother are both living, and occupations of the father and of other relatives. It should contain information concerning the family's plans as to the further education of the pupil and their probable ability to aid in financing further education. The pupil's age, grade in school, health record, and general intelligence should be included; also his record in different school subjects, especially in those which offer exploratory experiences for specific occupations or for occupational fields. If the pupil showed special interest in any particular occupations while pursuing the course in occupational information, the records in the counse-

lor's office should bring this to his attention. Further, the records should include information concerning extra-curricular activities in which the pupil is engaged and his achievements in them, his after-school and vacation employment, and any hobbies or special interests that claim his attention outside school hours. In the case of some pupils there will be reports from social agencies that have aided the family, or from a psychiatrist who has had occasion to examine the pupil, or from a probation officer who is looking after him by order of the juvenile court. The greater the amount of pertinent information the counselor has in mind concerning the pupil the more successful will be the interview, both in obtaining further significant information and in directing wisely the pupil's thinking on choice of an occupation.

Building up useful pupil records for the counseling interviews. In order that this information may be available for ready use by the counselor it is important that a special record card for each pupil be made out at the beginning of the seventh grade. To this card should be transferred whatever of the desired information is found on the cumulative record card which has followed the pupil from grade to grade. The counselor's office would then proceed to fill in the gaps in this information. If a parent visits the school, the principal and any teachers to whom the parent may talk should report to the counselor items that would be of value to him in dealing with the pupil concerned. Reports of visits to pupils' homes by anyone connected with the school certainly should be made to the counselor. In fact, when such visits are made the visitor

should make it a point to bring back certain information desired by the counselor, if it is not already on file in the school. Class teachers and home-room teachers should report promptly any special interests or outstanding qualities they discover in their pupils. Contributions of distinct value should come frequently from teachers who supervise the games and athletic activities, and the dramatic, debating, and other clubs fostered by the school. Scattered here and there among the teaching staff is a wealth of information concerning pupils, now usually dissipated, that would be of great value to the counselor if it were only brought together in his office and entered upon the record cards. The counselor himself would, to be sure, add to this information concerning any particular pupil after each interview with him. It is understood that the counselor would evaluate the whole of this material before using it, differentiating between objective facts and mere opinions, and making allowances for the peculiar prejudices of some of those who submit reports.

From what has been said it must be clear that individual counseling is a *school enterprise* rather than one in which the counselor alone is concerned. The keen interest and hearty coöperation of the entire staff are necessary in order to obtain the best results. And this is true not only in the matter of bringing together the desired information concerning pupils. It is equally true in developing the right attitude towards the counseling program on the part of pupils. If all the teachers believe in this program and are sympathetic towards it, recognizing that it is a school enterprise for which they as well as the counselor are responsible, the pupils

generally will look upon it with respect and confidence. The work must center in the office of a trained counselor to be sure, but he cannot do it alone, no matter how efficient he may be.

Conducting the interview. Returning to the counseling interview, it has already been noted that the counselor will usually come to this with considerable knowledge of the pupil, even though it may be the first time they have met. If it is a first interview, the first objectives will be to make the pupil feel at ease, to disarm any prejudices he may have against the counselor's office, and to gain his confidence. In order to accomplish these objectives the counselor will need to make wise use of what he knows concerning the pupil's special interests and hobbies. The procedure involved is very similar to that used in interviews by high-class news reporters. This was ably described a few years ago by Isaac Marcosson, the famous war correspondent, in the following language:

"Every man is a law unto himself," said Mr. Marcosson. "There are no two human beings alike in the world. Before interviewing a man, you should learn all about him that you can. The more you analyze the process of interviewing the more marked becomes the parallel with salesmanship. Men often fail in business because they use the same arguments with everybody. They forget that each human being is a law unto himself. It would have been impossible to get next to Lloyd George with the same line of selling talk that you employed to make Sir Douglas Haig break his chronic silence. Each of these remarkable men — and they are types — required an entirely

different line of approach, based upon a knowledge of their work, interests, ambition, and personality.

" Ever since those early days I have invariably made it a point to find out all I possibly could about a man before I went to see him. Before the war if I knew nothing about a man's particular hobby or interest I made it my business to find out something about it — whether it was horses, yachts, good roads, landscape gardening, first editions, etchings, or baseball. Great soldiers and famous publicists are simply human beings. They have some interest, and with that interest you can disarm prejudice and even sterilize opposition to your purpose."

Having gained the pupil's confidence, the counselor could easily inquire about his plans for the next year, for the rest of his high school course, and after his high school work is over. This would naturally lead to questions concerning the pupil's choice of occupation; whether he has made a choice, why he thinks it suitable, and what preparation he is planning to make for it. If no choice has been made, the conversation might be directed towards a few occupations that have aroused the pupil's interest. Whatever occupation is discussed should be considered in relation to the pupil's general intelligence, health, physique, temperament, general school record, record in try-out experiences, achievement in extracurricular activities, and the like. Suggested references which deal with an occupation in which he is interested may be given to the pupil, and arrangements may be made for him to talk with someone who has succeeded in the occupation under consideration. Of course attention should be given to

his plans for further education. The pupil may be asked to fill out a simple self-analysis blank which will give his own estimate of himself in certain important qualities. If conditions seem to justify it, attention may be given in a considerate manner to remediable personality handicaps and methods of overcoming them.

Closing the interview. As the counselor brings the interview to a close, he should sum up with the pupil the situation as it stands. If the situation warrants it, he will make some concrete suggestions as to what the pupil should do in order to gain additional information or experience which will aid him in making his choice or in preparing himself if a suitable choice is already made. He may find it desirable to stress the fact that a suitable choice is much more important than an immediate choice and to advise delay in reaching a decision until more evidence is available or until the evidence is more carefully studied. In exceptional cases he may wish to schedule another interview at some date in the near future. He will call the pupil's attention to his after-school office hour when any pupil who wishes may come in and see him about vocational problems.

The pupil should go from the interview with a feeling that choosing his occupation is a serious undertaking and that the responsibility for whatever choice is made must rest with him. He should also carry away with him a profound belief that the counselor is genuinely interested in helping him to make a wise choice and is able to give him valuable assistance in the matter.

Recording the interview. In making a record of the interview, part of which may be entered while talking

with the pupil and part after he leaves the office, the counselor will check the accuracy of information already on file concerning the pupil and will supplement this with additional information called for on the record blank to which references have already been made. He may wish also to add a few brief memoranda of things about the pupil that impress him as significant, though he will need to guard against placing too great value upon hastily formed impressions. The self-analysis made by the pupil, while constituting a part of his record in the counselor's office, should be filed separately from the record blank and should be accessible only to the counselor. It should be treated as a confidential statement of the pupil and therefore protected from examination by teachers, who may at times have access to the record blanks referred to above. Both record blank and self-analysis will be referred to in connection with later interviews and with placement when the pupil leaves school to enter a wage-earning occupation.

The self-analysis blank. There are some who insist that the use of a self-analysis blank with pupils in the secondary school stage of their education, and especially in the junior high school period, is impracticable. They argue that these pupils are too young to rate themselves on qualities in which the counselor is interested and that if they attempt to do so one will rate himself too high on desirable and too low on undesirable qualities while another overconscientious individual will do just the reverse. It is true that a self-analysis blank in order to be of value must be planned to suit the stage of development of those who are to fill it out. It

is quite as possible to prepare one suited to junior high school pupils as to prepare one suited to college students. The former will be simpler than the latter and therefore the information furnished less complete and, possibly, the self-ratings obtained from the former will be less reliable than those obtained from the latter, though on this point we have no definite data. It is to be expected that some will rate themselves higher than they deserve on such qualities as leadership or persistence and others lower than they deserve. But the ratings are of distinct value to the counselor nevertheless when considered along with the other data in his office concerning the same pupils. The important thing is that pupils consider filling out the blanks a serious piece of work which is to be done as conscientiously as possible. If they do this, the counselor will find the data furnished very much worth while. At the same time pupils will find it easier after such a self-analysis to compare themselves with the requirements of occupations in which they may be interested. Moreover, some of them will be impressed with the need of self-improvement in certain qualities in which they have felt obliged to give themselves a comparatively low rating, and, as a result, will make definite efforts to improve themselves in these respects.

QUESTIONS AND EXERCISES

1. Give reasons for the haphazard and unscientific character of the vocational counseling of individual pupils as done in most high schools in the past.

2. Should the junior and senior high schools attempt to provide expert individual counsel for each pupil in the matter of choosing a vocation? Explain your answer.

3. Describe the vocational counseling work done in the high school which you know best. Is it expert? Does it reach all pupils?

4. Select some high school pupil whom you know well and write down what you know about his home, the pupil himself, and his school and other activities which would aid a counselor when considering with him his choice of a vocation. What more would you like to know?

5. Suppose that the pupil is thinking favorably of architecture as a vocation. What specific information concerning architecture have you that would be useful in a counseling interview with him?

6. Outline a plan for bringing together the information concerning pupils which is needed for effective individual counseling.

7. In a certain large high school, responsibility for vocational counseling is placed upon home-room teachers who teach the same number of periods as other teachers but have one period a day of home-room work, whereas other teachers have one period of study-hall duty. Criticise this arrangement as a means of providing effective vocational counseling.

8. In the high schools of a large city there are "grade principals" who do no teaching. The number of these officers in a school varies from four to eight, according to the size of the school. The grade principal performs for his grade the administrative and disciplinary duties of a principal, having the same pupils, in the main, throughout their entire course. The number of pupils in a grade is 250 to 500. Recently responsibility for vocational counseling has been placed upon these grade principals. Point out the strong and weak features of this arrangement.

9. What should be the preparation of a vocational counselor?

10. Outline what should be included in a counseling interview.

11. Prepare a self-analysis blank suitable for junior high school pupils which should bring out information useful to the counselor.

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CHAPTER VIII

VOCATIONAL PREPARATION IN A CITY GUIDANCE PROGRAM

Vocational preparation part of a comprehensive guidance program. In the process of transfer from school to occupational success, preparation for the occupation must, of course, take place somewhere along the line. In many occupations, both business and industrial, this takes place after employment begins. In others, preparation to a greater or less extent is made in the school or under school supervision before entrance upon regular employment occurs. In still other occupations, a long period of highly specialized preparation precedes actual entrance upon the duties of the occupation, as in case of the professions. In any case it is clear that the individual's vocational success depends upon the quality and completeness of his preparation as well as upon suitable choice of an occupation. Vocational preparation, then, wherever and whenever obtained, is a necessary and important part of the process of transfer from school to occupation and therefore is of concern to us in considering a guidance program.

We have already noted that the vocational counselor should assist pupils who have made definite occupational choices to plan their vocational preparation.

Having been aided in choosing their work by means of information courses, try-out experiences, and individual counseling, these pupils are now ready for help in planning their preparation; whether this is to be obtained in the school system or outside it and whether specific preparation should begin at once or be postponed until later. But this has been discussed sufficiently elsewhere. What claims our attention here is the school system's part in *providing* the preparation. The question for consideration is: What provision for vocational preparation should be made by a school system which undertakes to develop a comprehensive program of vocational guidance?

Society pays for vocational preparation however obtained. At the very beginning of the discussion of this subject it is well to remind ourselves that, however vocational preparation is obtained by an individual, in the long run society pays the bill, or most of it. If one prepares in a State educational institution for a profession, the public at once assumes a part of the cost in taxes for the support of the institution. The individual, to be sure, pays heavily for the time being in loss of earnings during his training period and in the price of tuition, books, etc. But when one enters upon this special training, the assumption is that society later will more than repay him in larger earnings over a long period of years than he would otherwise receive. If the individual is prepared or partially prepared by the public school system for a trade or for an office position, the same thing is true. If the training is obtained in a private institution conducted for profit, such as a business college, then the entire cost is borne

at first by the individual, and the cost to society goes over into the deferred-payments column. Again, if the training is obtained wholly in employment, its first cost is shared by the learner, in that his wages are lower during the learning period, and by the employer, in that more supervision is necessary, a larger waste of material occurs, there is heavier damage to equipment, etc., during a worker's learning period than later. But the employer passes on his share to the public without delay in higher prices for his products or service, while the learner is reimbursed later in the wages of a trained worker.

Public control of vocational preparation desirable. Since the final cost of vocational preparation, however obtained, is paid by the public, the logical conclusion is that the public, as a matter of economic self-protection, should determine how this preparation can be given most effectively and economically for each occupation and what public provision is necessary or desirable for this purpose. Possibly some of the preparation now given in employment could better be given in a tax-supported school before employment begins, or *vice versa*. Possibly more of it should be given upon a coöperative plan arranged between public school and employer. And if the public undertakes to answer these questions in a given community, it must, of course, approach the task through society's educational agency, the public school system.

A continuous occupational survey of community necessary. Only one satisfactory way has yet been found in which public school authorities in any community can determine what vocational preparation

they should provide and how they should provide it, and what should be left in the hands of employers and other nonpublic agencies. A careful investigation or survey of each occupation, with the coöperation of workers and employers, is necessary. Such an investigation must seek to answer the questions: (1) What training is necessary for success in the occupation? (2) What conditions are necessary in order that this training may be given effectively and economically? (3) Can these conditions best be realized in a tax-supported school, in employment itself, or in a combination of the two? Furthermore, evidence of this character must be kept up to date by occasional checking from time to time as conditions change.

It will be found that the same investigation which supplies the information needed in order to determine how preparation for a given occupation should be provided will readily supply also the material needed concerning the same occupation in information courses and in individual counseling. Really, a continuous occupational survey of the community is needed for all three of these purposes and should be provided for in a comprehensive program of vocational guidance. Along with this survey would go, very naturally, an investigation of the effectiveness of the vocational preparation which the schools are providing; for it will be found necessary not only to determine what vocational preparation the school system should furnish but also to ascertain from time to time how effectively this is given.

When it is proposed that the vocational preparation which a community ought to furnish through its public

schools should be determined by a local survey, it is assumed that needs of this character differ in different communities. The population of the community, the general character of its industrial and business activities, the number of trained workers needed in various lines of employment, the vocational education already provided in various ways, the extent and character of coöperation which may be expected from employers and workers, and many other things would have to be taken into account. It is never safe, though it is often done, for one school system to launch a given program of vocational preparation simply because this program has proved successful in another school system.

Nevertheless, along with the survey of local conditions should always go a careful consideration of efforts made by other cities to meet their conditions and needs. What has been done elsewhere often suggests interesting possibilities even though it may safely be copied outright only under exactly similar conditions. With this understanding it seems wise to present here a brief summary of what school systems are now doing in providing vocational preparation.

Preparation before employment begins. When public school authorities first undertook to provide preparation for vocations, the logical thing to do was to establish schools and classes for this purpose which were comparable to the schools and classes furnishing general education. Consequently business classes were organized in the high schools and, in some of the larger cities, commercial high schools were established. Following the same lead, household arts courses were developed in the high schools, classes in agriculture were

organized, and high school classes or special schools to prepare boys and girls for industrial occupations were established. The idea in all this, insofar as it was vocational at all, was preparation in advance of employment.

1. *For business pursuits.* Preparation in regular school classes in advance of employment has proven very popular in the commercial field. The report of the North Central Association of Colleges and Secondary Schools for 1925 shows that there were 309,395 enrollments in commercial subjects among the 678,935 pupils enrolled in the 1571 public high schools included in the Association. Questions might fairly be raised as to how much of this is vocational preparatory work, as to the proportion of commercial occupations for which preparation is provided, as to the quality of the preparation offered in many of the smaller schools, and whether many of these boys and girls might not better be preparing for other than commercial occupations. But preparation on this plan for commercial occupations at least attracts the students and gives every indication of being practicable, especially for typing, stenographic, and bookkeeping positions.

2. *For homemaking.* Preparation for homemaking, insofar as the schools have undertaken it, also has been conducted chiefly on the same plan; that is, in advance of actual responsibility for the work of homemaking. The North Central report just referred to shows that 100,156 girls, or about 33 per cent of the girls enrolled, were pursuing the so-called homemaking subjects in regular high school classes in 1925. While this is not a large percentage of the girls who will assume homemaking responsibilities, and while many questions might

be raised as to the narrowness and ineffectiveness of much of the preparation furnished, here is evidence of a widespread effort on the part of public high schools to provide a much needed type of vocational education. The fact that nearly all girls will have to assume home-making responsibilities, and the further fact that practice work or projects can be carried on in the girls' homes in connection with school instruction, make this occupation one for which preparation in advance is particularly suitable. There are always enough pupils with common interests to form classes, and opportunities for practical application of the instruction are always available. It must be admitted, however, that this occupation, neither in its preparation aspect nor in any other aspect, receives the attention it deserves in vocational guidance programs, probably because it is not a " wage-earning " occupation in the usually accepted meaning of this term.

3. *For agricultural pursuits.* While preparation for agricultural occupations, as a public school enterprise, is carried on almost wholly before regular entrance upon the occupations, nevertheless the fact that many of the students assist their fathers in farm work on Saturdays and in the summer vacations and the further fact that a considerable amount of supervised home-project work is required make it possible to give this preparation a certain practical character not usually found in vocational education which precedes employment. In fact, elements of another plan of training are present, the plan which provides preparation along with experience in the occupation. However, agricultural education, as noted in an earlier chapter has found a

place in few large school systems. It is generally thought of as belonging to the small community where rural life and interests are strong. Only 17 of the 137 communities in Michigan in which Smith-Hughes agricultural classes were conducted in 1925–26 have a population of 5000 or more. And yet there seems to be no good reason why an adequate system of vocational guidance should not discover many youths in every large city who might well be general farmers or farm specialists and who need an opportunity to prepare for this work while still in school. Modern life is so organized that it encourages farm boys to go into the industrial, business, and professional occupations of the cities. It would be fortunate if more city schools would help their youth to find out whether they are suited to farming and to help those prepare for it who find it a desirable occupation. Surely, with a rural population of more than fifty million, the high schools of the United States should be preparing more than 67,545[1] for agricultural occupations.

4. *For industrial pursuits.* Preparation for industrial occupations in advance of employment as a public school undertaking has achieved only moderate success. Twenty years ago leaders in the industrial education movement, then in its early stages in this country, believed that three fourths of the boys and girls who were leaving school early to enter wage-earning employments would stay in school and learn trades if the opportunity were provided. Proceeding on this theory, numerous trade schools were established in the eastern states, especially in Massachusetts. After two decades

[1] Ninth Annual Report of Federal Board for Vocational Education, 1925.

we find only 4014 pupils in the public all-day schools of trade and industry in the State of Massachusetts as compared with 30,256 in the four-hour-a-week compulsory part-time schools. And this in face of the facts that only boys and girls fourteen to sixteen years of age who have left full-time school for employment are required to attend the part-time schools, and only 72 per cent of the state's population is represented in the cities which maintained such schools in 1923–24. And yet Massachusetts has been more successful than any other state in developing the all-day industrial school. In the United States as a whole there were only 33,533 boys and 6133 girls in such schools receiving Smith-Hughes aid in 1924–25.

One serious difficulty encountered is that, far more than agricultural, homemaking, or commercial education, industrial education breaks up into preparation for special occupations or trades, such as carpentry, brick-laying, plumbing, painting, tool-making, die-sinking, pattern-making, printing, and the like. Only in cities of considerable size or in those where industry is highly specialized, are found enough boys who wish to prepare for any one of these trades to justify the expense of maintaining the necessary equipment and employing the properly prepared teacher. Efforts made in Connecticut to overcome this difficulty by developing a system of state trade schools has met with some success, though handicapped by the necessity for part of the pupils to live away from home.

Another difficulty which must be faced frankly, is that when a pupil completes a two-year trade course at sixteen or seventeen years of age it is often very dif-

ficult for him to find employment at that trade, even with the aid of a school placement office, before he becomes eighteen years of age. Many employers insist upon a certain degree of maturity in those whom they engage for skilled work, if, indeed, they do not require it of all workers. Also, in some states, workmen's compensation acts and the laws prohibiting work before a certain age upon so-called dangerous machines interfere with employment even as apprentices, before eighteen years of age. Consequently many trade school graduates must either find employment, for a time at least, in some other occupation than the one for which they prepared or they must continue their school preparation until they become eighteen years old. Few of those who enter the trades have thus far shown a willingness to remain in school until eighteen; and many of those who temporarily enter some other occupation never get back to the one for which they prepared.

It must be recognized, also, that as modern industry is organized there is an enormous number of jobs for which no definite school training is needed before employment begins. The work is so highly specialized that it can be learned in a few days, if not in a few hours. To cite an extreme case, 4032 different jobs in a large manufacturing plant in Detroit were classified as follows according to the time required to become proficient:

1743 jobs or 43 per cent require 1 day or less.[1]
1461 jobs or 36 per cent require 1 day to 1 week.
251 jobs or 6 per cent require 1 week to 2 weeks.
534 jobs or 14 per cent require 1 month to 1 year.
43 jobs or 1 per cent require 1 year to 6 years.

[1] Mead, J. E. — *Salvage of Men.* Ford Motor Company, 1919.

Notwithstanding these difficulties, and others which might be mentioned, there can be no question that a great deal of valuable vocational preparation is now given in all-day industrial schools, nor, on the other hand, any doubt that much more preparation of this sort might be carried on with profit as a part of public education in advance of actual employment.

All large cities will find a genuine demand for this type of vocational preparation and every city of more than 50,000 population should give careful consideration to the desirability of providing it for a limited number of occupations. Nor does it seem too much to expect that more state schools for training industrial workers may be established, and provision made for pupils to earn their living by work done in the school in connection with their training.

Vocational preparation by means of correspondence courses. An effort to overcome the first difficulty mentioned, namely, that of providing in a small community preparation for a variety of occupations, deserves attention here. In 1922–23 arrangements were made by S. C. Mitchell, principal of the high school at Benton Harbor, Michigan, for a few of his pupils to obtain vocational preparation from a Chicago correspondence school. At first, each pupil's correspondence course work was done under the principal's supervision. Later, after Mr. Mitchell became Superintendent of Schools, the work was taken over as a public school project and a full-time teacher employed as director of correspondence study. The correspondence school agreed to charge comparatively small fees for its courses taken in this way. The Benton

Harbor Board of Education agreed to pay these fees, believing that this was not only the most economical way but also the only way in which they could provide such vocational preparation as their high school pupils needed. Later other correspondence schools were brought into the arrangement for the purpose of widening the range of vocational courses offered. In 1925–26 this little city of 13,000 population had 76 high school pupils and 38 pupils in part-time school obtaining preparation for occupations on this plan. Among the courses taken were the following: advertising, airplane engines, automobile repair, cartooning, commercial art, electrical engineering, accounting, navigation, plumbing and heating, poultry farming, salesmanship, show card writing, surveying, and mapping. Four correspondence schools were coöperating in this work.

Some of the largest and best known correspondence schools are now promoting this plan with high schools throughout the country. Besides offering a possible solution of the small town's difficulty in providing varied vocational preparation, the plan also may be used by larger cities to supplement its usual program by providing preparation for those occupations which appeal to comparatively few pupils. In no case, however, should correspondence study be looked upon as a substitute for class instruction where it is practicable to organize and conduct the latter.

Preparation in connection with employment. 1. *The coöperative plan.* The coöperative high school course has been used in a number of cities to provide preparation for industrial and business occupations.

This type of course, developed by Dean Schneider of the University of Cincinnati, as a plan for training engineers, was first adapted to high school use for preparing trade workers at Fitchburg,[1] Massachusetts, in the year 1908. Other cities extended the plan to include training for office positions, retail selling, and other business occupations. The plan involves placing pupils in half-time employment at occupations which they wish to follow, the other half of their time being spent in high school in pursuit of studies that relate to their occupations. Usually two pupils are assigned to the same job so that when one is in school the other is at work. The pupils are supervised in their employment to some extent by a representative of the school, in order that their work assignments may be varied and educative. The coöperative course was organized in ten high schools of New York City in 1915. Some years later the course was abandoned in all but one of these high schools, which continued the industrial coöperative work for boys for the entire city, and a new commercial high school was organized to take over all the coöperative training for business occupations for both boys and girls. In Pittsburgh, Pennsylvania, coöperative high school work was undertaken some years ago in department store and office occupations. In October, 1925, similar work was organized along industrial lines in the vocational schools of that city, and before the end of the school year, 100 boys were in training on this plan, spending alternate periods of two weeks each in school and in employment. Lansing,

[1] McCann, Matthew R. — *The Fitchburg Plan.* United States Bureau of Education.

Michigan, has maintained successful coöperative high school courses along industrial lines for nearly fifteen years. Large automobile companies have given this work cordial support, both by providing jobs for the boys while in training and by taking on these same boys for full-time employment when the period of training was over. During the year 1925–26 there were 143 Lansing high school boys preparing for industrial occupations on this plan. Among the occupations were those of machinist, tool-maker, auto-mechanic, pattern maker, sheet-metal worker, general mechanic, welder, plumber, tool designer, mechanical draftsman, architectural draftsman, builder, electrician, radiotrician, printer, and book-binder. More than forty establishments were coöperating, the largest number of boys in any one establishment being twenty.

2. *The compulsory continuation or part-time school.* A type of vocational preparation conducted by the public which reaches a comparatively large number of youth after employment begins is found in the continuation or part-time school. The reason is that in about one half of the states this type of school is required by law. The legal requirements [1] differ in different states in regard to the population of the school district which must establish a part-time school, the number of hours per week that boys and girls must attend (varying from four to eight hours), the age to which attendance is required (sixteen years in some states, seventeen in others, and eighteen in others), conditions on which exceptions from attendance are permitted, and other respects. The Federal Board for Vocational

[1] Keller, Franklin J. — *Day Schools for Young Workers.*

Education[1] reports that for the year ending June 30, 1925, there were 319,002 pupils in federal-aided part-time schools. To be sure the great majority of these, 265,335 to be exact, were in what are known as general continuation schools and were, therefore, not preparing for specific occupations. But the mere fact that these young workers are brought together each week for instruction, forces upon the school authorities consideration of their vocational education needs, provides opportunities to give those who need it assistance in transferring to more suitable occupations, and focuses attention upon other problems of vocational adjustment. A considerable amount of valuable vocational preparation can be given to these boys and girls even though most of them may be engaged throughout their lives in work that requires comparatively little skill or intelligence. Especially may habits of work and ideals be given direction, and wholesome attitudes and behavior towards employer, fellow workers, and work itself be established, all of which are part of vocational education.

In the case of those pupils who are already suitably employed in occupations which require special training, it is the business of the part-time school either to provide such training itself or to assist these pupils in obtaining it through their work or through some other educational agency. And the same responsibility rests upon the part-time school to assist pupils to obtain preliminary training for suitable occupations which they have chosen but which they have not yet found it possible to enter, in case these occupations call for

[1] Federal Board for Vocational Education. *Ninth Annual Report.*

considerable special preparation. Both in providing occupational extension work for the former of these two groups and occupational preparatory work for the latter it may prove wise to take advantage of the Benton Harbor plan of supervised correspondence study. In this way even the smaller school systems will find it possible to meet the vocational education needs of practically all capable and ambitious pupils in the compulsory part-time school.

3. *Voluntary part-time schools for apprentices.* In several large cities another type of publicly controlled part-time school is making an important contribution to vocational preparation, particularly in the building trades. The school referred to is for apprentices regardless of their age. Few of these apprentices are young enough to come under the provisions of the compulsory part-time school law in states where such a law exists. Providing these schools is, therefore, a purely voluntary service on the part of the school systems. In case of closed shop trades usually an agreement is entered into between the school system, employers, and the labor union representing the trade concerned. By this agreement all apprentices in the trade are required to attend class instruction one half day each week, the employers and the unions taking it upon themselves to enforce this provision if necessary. The school system provides the necessary classrooms, workshops, equipment, materials, and teachers. Employers pay their apprentices while attending the school in the same way as if they were at work. The unions give the school their moral support, work with the school authorities and the employers in determining

what shall be taught, and exercise disciplinary measures if necessary to enforce attendance. Often a probationary period of three months' employment is required before an apprentice is allowed to attend the school. In open trades, service managers sometimes take the places of the union representatives.

Cleveland affords a good illustration of this type of preparation for occupations. The following table shows the number of apprentices in different trades who were attending such part-time schools for apprentices in Cleveland in March, 1926:

Auto mechanics	44
Plumbers	143
Machinists	91
Bricklayers	197
Carpenters	218
Painters and paper hangers	81
Electricians	109
Total	883

4. *Evening classes.* Vocational preparation in evening classes conducted by the public schools is so generally recognized as desirable where conditions warrant its establishment that little discussion of it is necessary here. The principal purpose of this type of work is to supplement the daily experiences of adult workers and thus make them more proficient in the occupations in which they are already engaged. To some extent preparation for industrial occupations not yet entered is provided in evening schools. But the federal government, in disbursing money for evening classes in the industrial field, recognizes only trade-extension work, or work supplementing daily employment. There were 86,540 students enrolled in such classes in

the United States during the year ending June 30, 1925. The same year there were 89,431 taking federal-aided evening courses in home economics and 14,417 taking similar courses in agriculture. For business occupations many city school systems offer in evening classes both preparation in advance of employment and further preparation after employment begins, but federal aid is not available for either.

In the smaller school systems, difficulties similar to those already discussed in considering preparation for industrial occupations in advance of employment are encountered in providing vocational education in evening classes. Some of these difficulties could be overcome by using the Benton Harbor plan of supervised correspondence study.

Present tendencies in vocational preparation. Such are the principal types of vocational preparation now provided by public school systems. It seems likely that all these types will continue to develop but that the largest development will be in preparation of various kinds after employment begins. This means that in the future far larger numbers than at present will be found in part-time and evening classes, supplementing the training they receive in employment or, perchance, preparing for a new line of work. It may mean that representatives of the school system, whose business is education, will go daily in large numbers into industrial and commercial establishments, whose business is production and service rather than education, in order to aid young workers in obtaining vocational training through the work in which they are engaged. Since in the long run the public pays for this training, it is

only fair that the public's educational agency should assume large responsibility for it. Moreover, this training is a logical part of employment supervision of young workers, which seems sure to become a more important activity of public school systems.

Again, a school system should be expected to go as far in providing vocational preparation as it goes in maintaining general education. That is, if a general high school course is maintained, then vocational preparation of high school grade should be provided. If a junior college is developed, then the city should be ready to provide preparation for occupations for which as much as two years of work beyond high school are needed. Always, of course, whatever is offered should be determined only after a careful survey of the vocational education needs of the community is made. But there is no more obligation resting upon the community to provide general education on a certain level than to provide vocational education on the same level. Indeed, the one who wishes the latter and is prepared to profit by it, is quite as justified in demanding such education of the school system as the one who wishes the former is justified in demanding it. If conditions do not warrant the establishment of a class with teachers and equipment, the school system may at least arrange for correspondence study under its supervision or may offer to pay the tuition fees for the desired course in some neighboring city. The school system thus becomes, as it ought, the agency of the community through which vocational education of a certain grade, as well as general education of the same grade, is made available to those who wish it.

QUESTIONS AND EXERCISES

1. Why should vocational preparation be considered part of a vocational guidance program?

2. Ought not responsibility for vocational preparation of less than college grade to be borne entirely by business and industry rather than by the school system? Why, or why not?

3. How would you proceed in order to determine the vocational education needs of your community?

4. Compare, in a general way, preparation in advance of employment in the five fields: the professions, business, homemaking, agriculture, and industry.

5. Why has preparation in advance of employment been found more difficult in the industrial than in other fields?

6. Are correspondence study courses of vocational character practicable as a means of overcoming some of these difficulties? If so, how?

7. How do you account for the fact that the coöperative high school plan of providing vocational preparation in connection with employment has not been adopted more widely?

8. What significance has the compulsory continuation or part-time school as a means of providing vocational preparation after employment begins?

9. Is the public voluntary part-time school for apprentices likely to become an important means of vocational preparation? Explain your answer.

10. Give an estimate of the importance of the evening vocational school.

11. Are public school systems likely to do more or less in the future in providing vocational preparation? Specify in what ways and give reasons for your answer.

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CHAPTER IX

PLACEMENT

In an earlier chapter it was stated that helping young people who have chosen the occupations they wish to follow to obtain advantageous entry into the work of their choice is part of a comprehensive program of vocational guidance. This is the problem of placement.

Objections to placement as a school function. Even among ardent supporters of the guidance movement, however, there are some who have denied and others who have been slow to admit that placement constitutes an essential and important part of vocational guidance. Brewer [1] points out at some length the objections as he sees them to including placement in the program, though he admits that "until the child is better equipped for seeking work, and until his sources of information are better, it may be necessary for the school system to maintain a placement bureau or to make placement work incidental to vocational guidance." [2] However, what Brewer really objects to, as the writer understands it, is that placement be allowed to crowd out or be accepted in place of other parts of the program — to play the part of the Arab's camel, as he expresses it. In another place he says: "If a system of

[1] Brewer, J. M. — *The Vocational Guidance Movement*, pp. 109–111.
[2] *Ibid.*, p. 276.

vocational guidance begins in the school, and early enough to give the child some insight and outlook regarding occupations before he needs to leave, there can be nothing but approval if placement and supervision of employment also form parts of the system." [1]

Certainly suitable placement is the culmination of vocational guidance effort when one considers the individual pupil. The question at issue between those who oppose and those who favor including this activity in the school program of guidance seems to be whether the pupil, ready to become a wage earner, shall be left to shift for himself at this point, taking advantage if he wishes of such private and public employment agencies as exist in his community, or whether the school system that has aided him in choosing the line of work he wishes to follow shall also aid him in obtaining a favorable start in that work.

In favor of leaving him to shift for himself, it is argued that the knowledge he has obtained through the occupational information course, try-out experiences, and individual counseling should guard him against any serious mistakes in obtaining employment, that such mistakes as are made will soon be corrected by changing employment, and that it is a mistake in the direction of too great paternalism to deprive the individual of exercising his own initiative and ingenuity in obtaining employment for himself. It is insisted also that where placement is included in the school program it is extremely difficult to keep it from monopolizing attention and support that belong to more fundamental aspects of vocational guidance. It is pointed out, more-

[1] Brewer, J. M. — *The Vocational Guidance Movement*, p. 250.

over, that in many cities public employment agencies already exist, supported at public expense for the specific purpose of aiding those who are in search of employment. Why duplicate in the school system work for which public provision is already made?

Guidance program incomplete without placement. In support of including placement in the school program of vocational guidance it is maintained that the whole program is left in mid-air, unfinished, if provision for placement is not made; that getting off to a good start in the chosen occupation is quite as important as choosing it, and there is no more reason to expect the unaided pupil to do the one to the best advantage than the other. He is just as likely to choose unwisely among several opportunities to enter the chosen occupation, if he should be so fortunate as to learn of several, as he is to choose the occupation unwisely in the first place. If it seems necessary for him to begin work quickly in order that earnings may come in as soon as possible, he is likely to accept the first position he can find in his chosen field. And what has been said about the social and economic waste involved in entering unsuitable occupations applies equally well to unfortunate entry into suitable occupations.

School placement office in position to render discriminating service. Certainly a well-managed placement office for pupils leaving school to enter employment will have available, or be in position to obtain, much more complete and reliable information concerning the different openings in a given occupation — where these openings are, their peculiar requirements, opportunities for promotion within the organization concerned, whether

the management is interested in developing its young workers or merely in exploiting them, and the like — than an individual pupil can possibly obtain on his own account. On the other hand, such an office will have available through the counselor's records in the different schools much more complete information concerning the pupils who have chosen to enter their particular occupation than employers could possibly obtain from any other source. It must be granted that bringing these two together is a service of great value to the prospective young worker and to the employer alike when performed in an honest and discriminating manner.

Placement does not eliminate pupil initiative. Nor does this service necessarily eliminate the exercise of initiative or ingenuity on the part of the individual seeking placement. It does not, or should not, say to a boy: "Here is just the right job for you. Report tomorrow morning to Mr. X and he will start you at work." Even if this were possible it would not be fair either to boy or to employer. In the first place the boy may ignore the placement office altogether if he sees fit, and find his own job. In the second place, if he asks the aid of the placement office, as he should be encouraged to do, he will still have the responsibility of deciding whether he would like any particular position which the office brings to his attention and the further responsibility of applying for the position and convincing the employer that he is the best individual available for it. Whether he learns of the position through his own efforts or through the placement office, the task of "selling" his services to the employer is still his and calls for initiative and ingenuity. The difference is in the

ease with which he finds a promising market, the more complete knowledge in advance of what he may expect in the nature of opportunities if he makes the sale, and usually a more favorable initial attitude on the part of the prospective buyer. It cannot be doubted that in many cases the youth is saved by the placement office from a discouraging and wasteful period of search which would have ended in acceptance of employment quite different from the occupation which he had chosen and for which he had prepared.

Placement work aids other guidance activities. It is true that placement work tends to attract public attention more than other aspects of the guidance program. The very nature of its work requires that it attract attention. It is in a sense the sales organization for disposal of the school system's product, or for that part of it which does not go to higher institutions for further preparation. And a sales organization which does not attract attention is a failure. Looking at the matter from another angle, a report of the placement office to the effect that a thousand boys and girls who were leaving school were placed in positions last year is likely to prove more interesting to the average school board member than a report that five thousand counseling interviews were held with pupils in the same length of time. But a wise leader of the vocational guidance program and a wise superintendent of schools will make it clear that real success of these placements depends upon the quality of the occupational information courses, the try-out courses, the individual counseling, and the vocational preparatory work done before the time of placement arrived, just as the success of a sales

department is determined by the earlier work done in the factory. There is no good reason why placement work, even though more spectacular, should detract in any way from adequate support of other parts of the guidance program. Indeed quite the reverse should be true. Successful placement work should attract attention and support to the entire program.

Placement, an educational service, is properly a school function. As for turning over to public employment offices the placement of those who leave our schools each year to enter wage-earning occupations, such a procedure is entirely out of the question. Only in the larger cities are public employment offices maintained, and even there they have thus far achieved only moderate success in the placing of adults. In some cities special departments have been opened for young workers, but comparatively few are served by these departments and the service rendered is usually unscientific and lacking in discrimination. If they obtain adequate information concerning those who are to be placed, they must obtain it from the schools which are under a different management and feel no immediate responsibility to the employment office. In short, the public employment office at best can do nothing for prospective young workers that cannot be done at least equally well by the school placement office, while the latter, because it is part of the school system, can do much that is impossible to the former. Besides the transfer of youth from school to employment is fundamentally an educational service, as will appear more clearly later, and as such should be under supervision of society's educational agency.

The nature of placement work. Enough has been said already to give an idea of the general nature of the placement service which should be incorporated in a comprehensive program of vocational guidance. However, a more systematic and detailed consideration of this service is desirable. What is involved in it? What are the steps through which the process of placement advances from the time it is decided that a pupil is to leave school until he is working successfully and with favorable outlook in an occupation for which he is suited?

The phrasing of the last question, as well as the discussion found in the pages immediately preceding, indicates that placement is not merely finding jobs for boys and girls who are leaving school. It is a much more complicated and discriminating piece of work than that. It may well include conferences between the pupil who is leaving and his counselor, a report concerning the pupil from counselor to placement officer, one or more interviews by the placement officer with the pupil, a call on the prospective employer by the pupil, reports from the pupil to the placement officer, reports from the employer to the placement officer, reports from placement officer to counselor, additional placements if necessary, and additional conferences between the counselor and former pupil if desired by the latter.

The counselor's interview with pupil needing placement. The counselor's interviews with pupils, discussed in the previous chapter, should make it the natural thing for a pupil to seek the counselor's advice as soon as leaving school to go to work becomes imminent. In addition, any teacher in the school who learns that a pupil is planning to leave for employment should

report this information at once to the counselor. Further, it might be understood throughout the school that no pupil can leave in good standing for the purpose of going to work without first having an interview with the counselor. In this interview, whether voluntary on the pupil's part or brought about through the initiative of the counselor, the possibility of finding employment in a relatively short time in the occupation of the pupil's choice and the other possibility of having to spend many months at some other work first will be discussed. The age of the pupil, the nature of the chosen occupation, and the general employment conditions of the time will all have a bearing on this discussion. Whether the pupil must have work of some kind at once or whether he can wait a few days or even weeks in order to obtain the kind of position he wants will be taken into account, as well as the data on the pupil's record card and self-analysis form. Any employment plans that the pupil may have already or that his parents may have for him will be considered. The counselor will discuss all these matters in the light of the information which he possesses as to employment opportunities for youth such as the one before him. After talking over with his parents the points discussed in this interview the pupil should return to the counselor for another interview, and perhaps for more than one. Out of these conferences with the counselor, the pupil should come with a pretty definite idea of the kind of job he would like and has a right to expect and the relation of this job to his chosen occupation. Also he should be urged to remain in school until a position is secured and to return to the counselor some time after

employment begins in order to talk over further preparation and plans for advancement in his work. If the pupil wishes to make use of the placement office, which he should be encouraged to do, he is now ready to be sent there by the counselor.

Information needed by placement officer. Before the placement officer sees the pupil he should have received the counselor's report giving the pupil's name, address, telephone number, age, grade, nationality, occupations of parents, intelligence rating, health record, school record, choice of occupation, moral and social qualities insofar as these have been recorded, evidence as to emotional stability, suggestions as to the general character of the first job desirable, and such other data as the vocational guidance department may have agreed upon as important for this occasion. Or, if preferred, certain parts of this information may be furnished by the pupil as he fills out a registration card upon his first appearance at the placement office.

And of course the placement office will have at hand information concerning available jobs. This office will have built up such relationships with many employers of young workers that when an opening for this kind of worker occurs, a request will be sent immediately to the placement office, describing the position and the type of worker needed. With a few employers there will be an arrangement for the placement office to let them know whenever a promising youth interested in their line of work is seeking employment. The number of employers of these two types will gradually increase as the work of the placement office becomes more efficient and better known. The office will develop a system for

finding out about other openings, making use for this purpose of those it has placed, communicating by telephone or letter with places likely to need young workers, and conducting employment opportunity surveys from time to time. Naturally, the office will have on file as complete information as it can obtain concerning desirable and undesirable features of each position, and a list of the qualifications required.

Placement officer's interview with pupil. The interview between placement officer and pupil should serve several purposes. In the first place it should aid this officer in deciding upon the positions for which he is willing to recommend the pupil, though the counselor's report will be given the greatest weight in this matter. In the second place it should help him in making his recommendation definite. In the third place it should give the pupil opportunity to learn about and weigh the merits of positions suggested by the placement officer. In the fourth place it should aid the pupil in making his application to the prospective employer as effective as possible by calling attention to defects of dress, manner, and personal appearance that should be corrected and by suggesting a good method of procedure in applying for the position he seeks, in order that he may make a good first impression. The value of even a little training in how to apply for a job is well illustrated by Reed.[1] She tells of giving every alternate youth who came for placement brief instructions as to how to make application. After 200 had passed through her hands she checked up on results and found that 90 per cent of those who were given instruction on how to apply were

[1] Reed, A. Y. — *Junior Wage Earners.*

successful in obtaining the positions they went after, while only 60 per cent of the others were successful. While discussion of things to be observed in applying for a position would undoubtedly have taken place in the vocational information class, it is, nevertheless, a good plan for the placement officer to bring these matters to the pupil's attention just before he starts out to make the application.

Reports concerning placement. It goes without saying that the pupil will be expected to report back to the placement office whether he was employed and, if so, the wages he receives and the nature of the work he does. It is to be expected, also, that the employer will send in a similar report. As a matter of fact, however, the placement office will often find it necessary to obtain this information by telephone or by a visit to the place of employment, even though the young applicant carries with him when he makes application an addressed postal card form for such a report or a duplicate form, one part to be filled out and returned by himself and the other part, by his employer.

The report from the placement office to the counselor after the pupil is placed would give a brief summary of the case, indicating whether it was necessary to recommend him to more than one employer, stating the character of the work the pupil is doing and the name of his employer, and suggesting any special training the young worker should obtain in order to fit himself better for his work or to prepare for promotion. This information would then be available for use if the youth, as he was urged to do, should come back for one or more later interviews with the counselor.

If the position which is obtained is held for some time, later reports, say at the end of three months and again at the end of six months or a year, from the young worker and his employer to the placement office are desirable. In some cases a personal call at the place of employment will be the best means of obtaining the information desired. If it appears that things are not going well or if some special advice or help is needed, a suggestion might be passed on by the placement officer to the former counselor to write the youth a note inviting him in to tell about his work and his plans. This would give the counselor a chance to get at any difficulty that may have arisen and to give the young worker helpful advice concerning plans for the future, his recreational and avocational activities, and the like.

Follow-up work, or employment supervision. If the young worker quits his job because of dissatisfaction or loses it because of failure or because his employer is reducing his working force, he should understand that he is welcome at the counselor's office for further advice and at the placement office for assistance in obtaining another position. Before his next position is obtained, however, he should understand clearly that the reasons for his leaving the former one have been investigated carefully and entered upon his record in the placement office. There is fairly general agreement among vocational guidance specialists that this replacement service under management of the school system should be open to all in the community who wish to use it up to twenty-one years of age. After that they must be expected to look out for themselves or patronize other public or private employment agencies.

Central placement office best. Running through all this discussion has been the assumption that there will be a single central placement office for the entire school system. In some cities, placement work has been carried on for years to a greater or less extent by one or more of the high schools. Where this has been the case the tendency is, when a comprehensive guidance program is undertaken, either to extend this plan to all the high and junior high schools or to allow it to continue in those where it already exists, notwithstanding the establishment of a central office for placement purposes. A single central office in charge of all placement work of the school system will be found to have many advantages over either of these other arrangements. Perhaps the most important of these advantages will be better coöperation from employers. If the average employer learns that he can draw upon the available supply of young labor from the entire school system by calling a single office on the telephone, he is much more likely to do this than if he knows his call will bring him only such service as one school can give. And he will be much more ready to submit reports and assist in other ways if he is dealing with one office instead of several.

The central office likewise opens up to each pupil who is leaving school the employment opportunities in his field afforded by the entire city. Good administrative policy also demands a central office for placement work. It is argued that the central office cannot possibly have that intimate knowledge of the pupil's characteristics and qualifications which is obtained by the counselor and that, therefore, central office placement is likely to become a card-catalogue, mechanical sort of thing.

This difficulty can be overcome, or largely so, if there is cordial coöperation between central office and counselors in carrying on the placement work. As one placement officer aptly expresses it: "Counseling becomes practical and placement becomes educational in direct proportion to the extent of coöperation between the counselor and the placement officer." Of course in the small school system the two functions will have to be performed by the same individual.

Placement a problem of large proportions. When it is recalled that nearly 1,500,000 boys and girls and young men and women leave our schools annually to begin wage-earning occupations (see Chapter I), the enormous proportions of the placement problem are apparent. And the difficulties of the problem are intensified by the fact that the great majority of these youth need placement help within a period of a few weeks at the end of the school year. Then a veritable flood of graduates and others pour from the schools eager for employment. Of the 1,500,000 a great many, of course, will find their own positions; but the number who will wish to avail themselves of the placement service of the schools will be very large, especially in cities of 50,000 or more population. Would not the cost of maintaining the needed placement machinery at ordinary times be prohibitive? And would not this machinery be utterly swamped with work at the end of each school year? School superintendents and boards of education have a way of finding money for things which they are convinced should be done. School placement work, if well done, is so obviously worth while that there need be no fear for its financial support, once those in

authority are brought to realize its possibilities. The danger, as noted earlier, is rather that it will get more than its share of the money apportioned to vocational guidance. Several city school systems are now financing fairly adequate placement offices, and will put more money into this work as developments justify it.

Load of placement work unevenly distributed. In some respects it is unfortunate that so large a part of the annual supply of young labor becomes available at one time, namely, at the close of the school year. The situation has been much improved by semiannual promotions which result in a considerable number of graduates and others leaving in midwinter, but this still leaves placement work congested at two comparatively brief periods instead of distributed fairly evenly throughout the year. Possibly it may be found desirable to organize reservoir classes for those young people who are awaiting employment after graduation, providing them with special instruction in preparation for wage-earning. Part of the instruction might be vocational and part civic and economic in character. These classes could then be drawn upon through the placement office to recruit the supply of young workers as needed in the community. This is not very different from what Boston school authorities did several years ago when they required continuation school children temporarily out of employment to spend twenty hours per week in the continuation school. A measure to this same effect passed the legislature of California in 1925 but was vetoed by the governor. In some high schools, graduates now are encouraged to remain in school for postgraduate work until they are placed. However, at

present the best the average placement office can do when it becomes swamped with prospective young workers once or twice a year is to place advantageously as many as possible, place others in temporary positions with the understanding that they will be helped later to obtain the kind of work they should have, and make others wait until opportunities for employment more nearly equal the supply of young labor. Fairness and a knowledge of home conditions are necessary in determining what to do in each case. If anyone objects or becomes impatient, he is at liberty to seek employment for himself. Even though the work which a placement office can do in these periods of stress is far from satisfactory, nevertheless it should be far more successful than the efforts of the majority of those who attempt to find employment without availing themselves of placement aid.

Placement not a single act but a process requiring time. It has been seen that placement is not a single act but a process lasting over a considerable period of time. It may begin long before employment begins and continue long after. That part of it which follows entrance upon employment, including reports to the placement office from the one who is placed and from the employer, conferences between the counselor and young worker, and later placements, is sometimes called "follow-up" work. It is essentially supervision of employment. The compulsory part-time school, or continuation school, is a great aid in this work in many states, since young workers under certain ages are required to spend a few hours in school each week, thus making them easily accessible to the counselor. This

part of the placement work, by whatever name it is known, constitutes an excellent check upon the rest of the guidance program and, indeed, upon the success of the school system in preparing its pupils for the world's work. If a pupil's choice of occupation proves wrong, as it sometimes will, the counselor is faced with the question, why? If a placement proves a failure with no evidence of wrong choice of occupation, then the same question confronts the placement officer. And both counselor and placement officer must often encounter evidences of success or failure on the part of the schools in providing the preparation for employment that business and industry have a right to expect. Information obtained in the follow-up work of placement should, if properly studied and used, gradually improve and make more effective the entire guidance program, including the vocational preparatory work of the school system.

Relation of placement to counseling. In some cities, for example in Cincinnati,[1] the placement office does a large amount of vocational counseling in connection with its placement work. Usually this is due to the fact that other parts of the vocational guidance program are not well developed in the school system.

In a comprehensive program of vocational guidance it is well to keep the vocational counseling function and the placement function fairly distinct. It is, to be sure, part of the work of the placement officer to counsel the applicant concerning specific employment opportunities as they relate to his choice of occupation. It is inevitable that at times some discussion will take

[1] Schwab, Abigail — "The Work of the Placement Office," *Vocational Guidance Magazine*, December, 1925.

place between the two as to the suitability of the choice of occupation, particularly in connection with second and later placements. But the placement officer should recognize always that his job deals primarily with *advantageous entry* of the youth into an occupation already chosen. It is the duty of the school from which the youth comes to help him make the choice. The school which has him under its supervision six hours a day for several years, which directs his study of occupations, which provides him with try-out experiences, which has a counselor to gather and study data concerning his physical, mental, social, and temperamental characteristics and to help him interpret occupational information and try-out experiences in relation to his personal qualities and limitations, is much more able to do this than is a placement officer who sees him for a few minutes on one or two or even half a dozen occasions. On this account it is usually better for the placement officer to send back to the counselor from whom he came any youth whose choice of occupation seems unsuitable, whether this is discovered at the time of the first interview or in connection with a second, third, or even later placement. In every case of this sort the placement officer should send the counselor a statement of his reasons for coming to the conclusion that the choice is unsuitable, especially any information from the youth's employers which bears on the subject.

QUESTIONS AND EXERCISES

1. Two capable boys, George and Henry, graduated in the same class from a large high school. George wished to go into newspaper work though his father was employed in a bank, while Henry aspired to banking though he had relatives in newspaper

work. Both had been aided by the school in making their choices, but the school system maintained no placement service for its students. It happened that, through his father, just the opportunity came to George that Henry sought. And, through his relatives, a good opportunity to enter newspaper work came to Henry. Neither knew of the other's opportunity. Both had been seeking work for several weeks and, therefore, accepted the positions open to them. Does it seem likely that a well-organized school placement office could have helped these boys to enter advantageously the occupations of their choice? Describe the procedure involved.

2. A director of vocational guidance maintains that placement of pupils who leave school for employment at or before graduation is as much a part of the school system's work as marketing its product is part of the business of a manufacturing establishment. In other words, he looks upon the placement office of the school system as the sales organization for its product. Does this analogy appear to you as sound? How effectively is the school system with which you are most familiar functioning in this respect?

3. Why have most colleges and universities made greater efforts to place their graduates who go into teaching than to place those who go into other occupations? Is this practice justifiable? Why or why not?

4. Give reasons why placement of boys and girls leaving school should be cared for by the school system rather than by state or other public employment agencies.

5. Is it too much to expect that a well-managed placement office of a school system should build up such relations with employers and render such discriminating service that most employers of the community would look to the placement office first when in need of young workers? Would it be desirable and practicable for employers generally to refuse to employ young workers coming directly from school except through the placement office? Give reasons for your answer.

6. In a school system with several high schools, should placement be handled by each school for its own pupils or should it

be cared for by a central office for the entire system? State the advantages and disadvantages of each method and suggest plans for using the best features of both.

7. Indicate ways in which the steps involved in placement may differ with different pupils.

8. Is it desirable and practicable that pupils seeking placement should be taught how to apply for a position? If so, when and how should this be done?

9. Is it possible for a school placement office to function so well that no follow-up work, or employment supervision, is desirable? What are the purposes of follow-up work? How long should it be continued?

10. Should placement in after-school and vacation jobs be part of the work of a school placement office? Support your answer.

11. Show how the compulsory part-time school lends itself to follow-up or employment supervision work.

12. How do the duties of a vocational counselor differ from those of a placement officer?

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CHAPTER X

ORGANIZATION AND ADMINISTRATION OF A COMPREHENSIVE PROGRAM OF VOCATIONAL GUIDANCE IN A CITY SCHOOL SYSTEM

In previous chapters attention has been given to the most important features of a comprehensive program of vocational guidance — occupational information, try-out experiences, individual counseling, vocational preparation, and placement. These are more or less distinct units of the program, which, nevertheless, have close relations to one another and also to other features of the school system. For example, the relationship between placement and vocational education as carried on in the schools is particularly close. If a placement officer recommends a boy for a position as a machinist's apprentice or a girl as a stenographer, he is concerned with the extent and quality of preparation which the schools have given these young people for the positions in question. Likewise there is a close relationship between the work of the counselor and that of the officer in charge of tests and measurements, especially insofar as the tests deal with general intelligence and special aptitudes.

The effectiveness of the guidance program as a whole, therefore, depends upon the kind of coöperation which exists between its various parts and between these parts

and other activities of the school system as well as upon the work done within each unit. This means that the organization and administration of the program are extremely important. They should be such as to facilitate and encourage the most cordial coöperation.

Examples of organization in larger cities. Up to the present time few city school systems in the United States can claim to have worked out and fitted into their general scheme of organization a satisfactory plan for administering as comprehensive a program of guidance as has been discussed here. The writer found in 1926 that of 113 cities having a population of 50,000 or more in 1920, from which reports on this subject were received (the 1920 census shows 144 cities with a population of 50,000 or more), only 28 were reported as having some officer in charge of the guidance program for the entire city. In a few of the remaining 85 cities certain guidance activities are carried on but without central direction.

The titles borne by officers in charge of the guidance program, the amount of authority vested in them, and their nonguidance affiliations and activities were found to differ greatly in different cities. In four cities the officer bears the title Director of Vocational Guidance, in one city, Director of Educational and Vocational Guidance, and in another, Director of Vocational Counseling. The title, Supervisor of Vocational Guidance, is found in one city, and Supervisor of Educational and Vocational Guidance in another. In six cities guidance and research are linked together administratively, and we find in three of these cities Directors of Research and Guidance, in the fourth, an Assistant

Superintendent in charge of these two lines of work, in the fifth there is a Director of the Bureau of Curriculum Development, Research, and Guidance, while in the sixth a Director of Attendance and Research is responsible for direction of guidance activities also. In three cities responsibility for the guidance program is assigned to the Director of Vocational Education; in one, to the Director of Vocational and Adult Education; in another, to a Director of Guidance and Extension Education; and in still another, to a Placement and Vocational Director. Still other titles of those in charge of city guidance programs are Director of Bureau of Attendance and Guidance, Director of Child Welfare, Chairman of Central Guidance Committee (2), Vocational Counselor (2), Junior Counselor, and Principal of Continuation Schools.

Naturally the guidance activities in charge of these officers differ in different cities. In one city of 56,000 population, a Director of the Bureau of Research and Guidance is responsible for occupational information work, occupational exploratory courses, vocational counseling, placement, issuing employment permits, and part-time or continuation classes, but not for other vocational preparation provided by the school system. In another city of 55,000 population, the Director of the Bureau of Child Welfare, in addition to other responsibilities, has charge of occupational information courses, vocational counseling, placement, and issuing employment permits. In a third city of 65,000, the officer in charge of guidance activities looks after vocational counseling, placement, continuation classes, and employment permits. In addition he has charge of

attendance and the school census. In a city of more than 70,000 the only guidance activities under direction of the one who is reported as in charge are continuation classes and granting employment permits. In a city of 75,000 a Chairman of a Central Guidance Committee looks after occupational information courses, counseling, and placement. In a city of 216,000 a Director of Bureau of Curriculum Development, Research, and Guidance has charge of vocational counseling, exploratory courses, and part-time or continuation classes, in addition to nonguidance responsibilities. In a city of 380,000, a Director of Attendance and Research has, in the field of guidance work, responsibility only for placement and issuing employment permits. In a city of nearly 600,000, a Director of Vocational Guidance has charge of exploratory courses, vocational counseling, placement, part-time courses, and preparation for industrial occupations.

The fact is that vocational guidance, being a later development, has been added in many cities to the work of a bureau or department already in existence. In some cases it has been the bureau of tests; in other cases, the vocational education department; in still other cases, the bureau of attendance, or bureau of child welfare. When this happens the director's primary interest is usually something other than vocational guidance. He is very likely to focus his attention upon some one aspect of guidance closely related to what he has been doing, rather than to develop a comprehensive program. Overemphasis of this aspect and omission or underemphasis of other aspects gives the results seen in some of the illustrations just given.

The administrative and supervisory activities involved. Probably the best method of arriving at a satisfactory scheme of organization for vocational guidance in a city school system is to make a list of the administrative and supervisory activities which seem necessary to an effective program. With a fairly complete list before us of the things to be done it should be easier to determine the organization required in order to do them. It will be understood that the following list of administrative and supervisory functions does not include everything that may need to be done in a large city and that it does include some things which may have to be omitted in a small city. It may be noted in passing, however, that the things to be done in the small city do not differ greatly from the things to be done in the large city. The chief difference lies in the assignment of a larger number of functions to one individual in the smaller community.

1. It is necessary to develop and keep in operation a plan for gathering the information needed concerning local occupations and preparing this for use by counselors and pupils. The plan must function in such a manner as to keep the information up to date as conditions change.

2. A similar plan is necessary for collecting information concerning specific employment opportunities in different occupations as these open from day to day. The success of placement work depends upon the effectiveness of this plan.

3. It is necessary also to bring together for the use of counselors the data needed concerning training opportunities of all sorts, whether provided by the school system itself in trade courses and business courses, or by universities in professional courses, or by private institutions such as business colleges, correspondence schools, beauty culture schools, and others.

4. Provision must be made for bringing together in the office of each counselor the necessary physical, educational, social, and psychological data concerning pupils who are to be counseled.

5. Counselors must be appointed, their functions defined, their work supervised, and a uniform system of records and reports for their offices developed.

6. It is necessary to work out plans for the placement office, to select its personnel, to determine its relations with counselors, employment permit officer, and others, and to supervise its activities.

7. Arrangements for issuing employment permits must be brought into such relations with counseling and placement as to guarantee both of these services to the youth who obtains the permit.

8. It is necessary to determine what vocational preparation shall be provided in the schools or under school supervision for those who have chosen occupations and to arrange for this work to be done effectively.

9. The work of the part-time or continuation school must be developed and carried on in a manner to make it as helpful as possible in adjusting to business and industrial life the young workers who attend it.

10. Attention must be given to keeping up to date the work of vocational preparation provided by the schools, whether provided in all-day, part-time, or evening classes, — actually preparing for business and industrial occupations as these are carried on in the community.

11. It is necessary to make provision for suitable try-out experiences in the different schools, to provide the needed teachers and equipment, and to supervise the instruction.

12. From time to time it will be necessary, or at least very desirable, to arrange for individual pupils to be given special examinations as to health, general intelligence, special aptitudes and emotional stability.

13. Provision should be made which will guarantee research and systematic investigation of guidance problems, with a view to improvement of the service rendered.

14. It is necessary to prepare budgets and reports covering the entire program of vocational guidance for presentation to the office of the superintendent of schools.

A careful examination of the above list of administrative and supervisory jobs will show that some of them are linked very closely with the administration of the high schools; others are quite dependent upon bureaus or departments that perform special services for the school system as a whole; and still others call for an organization that is more or less independent of other organized units of the school system. Appointing counselors, bringing together the needed data concerning pupils, and providing desirable try-out experiences belong to the first class. Arranging for pupils to be given special examinations as to health, intelligence, or emotional stability belongs to the second class. Gathering information concerning occupations and concerning specific jobs, and working out arrangements for placement, belong to the third class.

General plan of organization. In the judgment of the writer, the organization outlined below, if properly staffed, will afford an effective means for performing the functions just listed and therefore for carrying on such a program of vocational guidance as has been discussed, while at the same time it would fit into the general scheme for administering the school system as a whole. The plan of organization here presented is for a large city.

The entire organization might be known as the Bureau of Vocational Guidance, or, for the sake of brevity, the Vocational Bureau. Its business should be to deal with those matters which are directly con-

cerned with the transfer of youth from school to suitable wage-earning occupations. Its principal officer should have the title of Director and should be responsible to the superintendent of schools or to an assistant or associate superintendent. In some cities it may be wise to make him an assistant superintendent. The director would give his entire time to the bureau and to its relations with other parts of the school system. With the assistance of his staff he would work out the program for his bureau, check up on the effectiveness of this program, carry on and direct research, prepare the annual budget, prepare annual and special reports, and the like. He would represent the bureau at conferences of the superintendent's administrative staff, and at meetings of professional, business, and industrial groups, and perform such other duties as would naturally devolve upon the head of a bureau of this character.

Under the director, the work of the vocational bureau would fall rather readily into the following parts which may be called divisions:

1. The vocational information and counseling division.
2. The vocational explorations division.
3. The vocational education division.
4. The placement, coördination, and permit division.

In a large city each of these divisions might have a separate head selected by the director and bearing the title of chief of the division, the whole group forming the director's immediate staff. In smaller cities the work of closely related divisions would naturally be

combined under one head, thus reducing the size of the staff. It would be a mistake, however, even in the small school system, as a result of these combinations, to lose sight of the differences in function represented by the different divisions.

The vocational information and counseling division. It should be understood that we are not concerned here with the nature of the occupational information which is brought together or with the actual work of counseling. These have been discussed in previous chapters. We are interested rather in the organization and direction which are needed in gathering and preparing the information and in the organization and supervision necessary in order to make the counseling uniformly efficient throughout the school system. In order to accomplish this work it will be necessary for the chief of the division to be a well-trained individual. He will find it an advantage also to have had experience as a counselor. He should be provided with clerical assistance, and in larger cities with such trained help as may be needed, usually chosen either from the counselors or from younger teachers who aspire to counselors' positions. Indeed this work offers an excellent opportunity to give a few carefully selected individuals part of the training needed for positions as counselors.

One of the first and most important duties of the head of this division is to see that competent counselors are appointed in the schools. The principal of the school in which a counselor is to work is keenly interested in this matter, also. The chief of the division will, therefore, confer with the principal when such an appointment in any school is to be made. It should

be understood that recommendation of appointment will be made jointly by the chief of the division, who should take the initiative, and the principal, and will be passed upon by the director of the vocational bureau. It will be found desirable to establish early, certain standards of training and experience which will be required of counselors. Personal qualities will, of course, be taken into account also. The counselor's rank and salary should be those of a head of department. The rare personal qualities necessary, combined with the training and experience required as well as the counselor's value to the school, amply justify this rank.

It is a further duty of the chief of this division to work out with the counselors a statement of their functions in the schools to which they are assigned, and to supervise the activities of counselors in order to make sure that the functions agreed upon are performed effectively. There is a tendency, as pointed out by the writer in an earlier publication,[1] for the principal to assign so many administrative duties of various kinds to the counselor that the real work of counseling suffers. The counselor should be expected to serve on school committees appointed by the principal, to enter heartily into the general activities of the school, and to be recognized and treated as a regular member of the teaching staff. He owes these things to the school and they contribute to the success of his special work. But it is the business of the head of this division to see that

[1] Myers, George E. — "A Critical Review of Present Developments in Vocational Guidance with Special Reference to Future Prospects," *Vocational Guidance Magazine*, March, 1924.

counselors do not become merely administrative assistants to the principal, as they have in some instances, to the serious detriment of the work for which they are appointed. It is unfortunate for the counselor's position to become looked upon as a stepping stone to an administrative position. When this happens in a school system, counseling is sure to suffer for the reason that it will attract people to it who are interested in it only as a stepping stone and not because counseling itself appeals to them.

The head of this division would be responsible also for gathering the necessary information concerning local occupations, for preparing this for use in the schools, and for supervising the occupational information courses that are offered to pupils. In gathering this information he would find it a good plan to use the counselors, as Edgerton did in Detroit,[1] dividing them into committees with a definite group of occupations to be investigated by each committee. If it is possible to organize this work as a university course in vocational guidance, as was done in Detroit in coöperation with the University of Michigan, so much the better. Certainly it affords extremely valuable training for counselors while at the same time it brings together the desired information. Final editing of the material would be attended to by the chief of the division and the special assistants in his office, if he has such assistants. Since counselors will teach at least part of the occupational information classes, supervision of this work will go naturally with supervision of counseling.

[1] Edgerton, A. H. — *Opportunities and Requirements in Local Occupations.* Detroit Board of Education.

The head of this division would be called upon also to prepare, for use by the counselors, information concerning places where pupils can prepare for the occupations of their choice. And he would be expected to see that a systematic plan is arranged whereby data gathered by teachers, school physicians, psychologists, social workers, and others concerning pupils are brought together in usable form in the office of the counselor.

The vocational explorations division. Try-out or exploratory experiences as part of a comprehensive program of vocational guidance have already been discussed. (See Chapter VI.) It will be recalled that in this discussion exploratory experiences were classified under three heads: (1) those provided in the school through the subjects of the curriculum; (2) those provided in the school by means of extracurricular activities; and (3) those provided outside the school in part-time, after-school, or summer employment. The problem which confronts us here is how to organize and carry on this work in an effective manner throughout the secondary schools of a city system.

It must be admitted that no city school system has yet made a serious attempt at an adequate solution of this problem. True, school systems generally have developed an extensive organization for practical arts work, some of which often goes under the name of try-out courses. It is true, also, that individual schools here and there are providing try-out experiences on a large scale by means of extracurricular activities. And in a few instances schools are supervising outside employment of their pupils with a view to making it function for try-out purposes. But no city school

system has attacked the problem as a whole and provided an organization to deal with it adequately. As far as the practical arts work in secondary schools is concerned, few of those in charge of it have realized at all fully its vocational try-out possibilities and fewer still have undertaken to reorganize the courses offered under their direction — courses which for the most part were developed originally to serve other purposes — with a view to make them function to the best advantage as try-out courses. Directors and supervisors of this work in most school systems are too far removed from the vocational guidance program to appreciate as they should the try-out aspects of the work in their charge.

In order to provide an organization which will make it far easier to arrange for adequate vocational try-out experiences, it is proposed that a second division of the vocational bureau be known as the Vocational Explorations Division and that this division shall have general responsibility for all the practical arts and other try-out activities in the secondary schools of the city. It should be understood that the term " practical arts " as here used includes agriculture, if this is part of the curriculum, and commercial subjects, as well as industrial and household arts. It should be understood also that we are not concerned here with any of these subjects as preparation for specific vocations but rather with their general education aspects, with the idea in mind of realizing more fully their vocational exploratory values. The place of these same subjects in the scheme of organization for definite vocational preparatory purposes will be considered later.

From the point of view, therefore, of the practical arts, the effect of the above proposal upon the plan of organization now in effect in most cities would be: (1) to bring the various phases of practical arts under a more unified immediate administration; (2) to relate them more definitely to the program of vocational guidance; and (3) to differentiate more clearly between the general education and exploratory values of the subject matter involved and the vocational education values of the same or similar subject matter. Supervisors of industrial arts, household arts, and commercial subjects could perform their proper functions at least as well under the chief of this division of the vocational bureau as under any scheme of organization now in effect. And the new organization would be far more likely, under the right sort of leadership, actually to achieve the much discussed but indifferently performed vocational try-out function of the practical arts. Certainly it would be a logical and important step in advance for the vocational guidance program to have one division of the vocational bureau definitely charged with responsibility for directing and supervising all those studies whose present place in the program of secondary education is now justified largely on the ground of their vocational exploratory values.

It seems logical, also, for this same division of the vocational bureau to exercise such direction and supervision over the extracurricular activities of the different secondary schools of the system as may be needed. If left entirely to the initiative of the individual school principals, these activities will be of distinct value for vocational try-out purposes in one

school and of little value in another. The possible values of extracurricular activities for vocational try-out purposes, as discussed elsewhere, are so great that someone in the school system should be made responsible for seeing that there is adequate provision for the realization of these values throughout the system. No one else should be in so good a position to do this as the one who has a similar responsibility in connection with the practical arts courses. Except in very large school systems, the chief of this division himself might do this work, or a special supervisor might be provided for it, or a supervisor who combines this work with some other duties might be appointed. It appears likely that many of the extracurricular activities may soon be brought into the curriculum and assigned to a certain hour or hours of the regular school week, as has already been done in a few high schools. When this becomes general, the necessity for supervision will be even more obvious than it is at present.

It is to be expected that the details of after-school and summer employment of pupils for try-out purposes will be cared for by the counselor and placement officer working together, just as full-time placement is cared for. It is highly desirable, however, that the head of the try-out or exploratory work shall coöperate with the heads of counseling and placement in developing plans for these placements and in supervising the work.

The vocational education division. A third division of the vocational bureau, in charge of an assistant director, should be held responsible for the entire voca-

tional education part of the bureau's program throughout the school system. Industrial education, meaning preparation for specific occupations in the industrial field whether provided in high schools, special trade schools, part-time schools for apprentices, evening schools, or by means of correspondence courses under public supervision, would be one part of the division's work. Business education, in the vocational preparatory sense of that term, provided in the high and evening schools, would constitute a second important part of the division's work. And compulsory part-time schools and classes, or continuation schools as they are often called, dealing as they do with boys and girls already at work, would also claim the attention of this division. If the city is large enough to justify it, there will naturally be a supervisor in charge of each of the three branches of the division's activities. In small cities it may be necessary to combine the work of this division with that of the second division for administrative reasons. In such case it is highly desirable to recognize that the functions of each are quite distinct, though both are related parts of the same program.

While this division would be expected to take the initiative in determining the vocational education needs of the community and the types of courses which should be offered to meet these needs, the experience of the counseling and placement divisions in their contacts with business and industry would be invaluable for this purpose and readily available, since the three divisions are parts of the same bureau. In the same manner this relationship between the three divisions would lend itself to a frequent evaluation of, or

checking up on, the effectiveness of the vocational courses offered.

Selecting teachers, supervising their work, providing the necessary equipment and supplies, and organizing new vocational schools and classes as needed are other duties of this division, always to be performed with the advice and approval of the director of the bureau.

Placement, coördination, and permit division. The organization necessary for successful placement and employment permit work is comparatively simple. In a large city it would consist of a chief of the division of the vocational bureau, a staff of placement and coördination officers, one or more permit officers and a small clerical force. One group of placement officers might well be assigned to industrial placements, another to business placements, and a third to placements in the home as maids, mothers' helpers, and the like. In some cities still further specialization may be desirable, while in smaller cities no special organization may be possible, all aspects of the work being looked after by the chief of the division.

It would devolve upon the head of this division, with the advice and assistance of the director of the bureau, to select the personnel of the placement office, to determine their respective duties, and to supervise their work. He would devise plans for collecting information as to specific employment opportunities as these arise from day to day, in order that the placement office may know just what jobs are open for young workers. His staff would be so organized as to assist in carrying out the plans devised. He and the head of the information and counseling division together

would work out the relations between the two divisions, agreeing upon the forms of reports which should be exchanged between counselor and placement office, arranging for exchange of information picked up by the one that would be valuable to the other, and performing other services already discussed.

Obtaining an employment permit is an important step in the transfer of many boys and girls from school to wage-earning. And those who take this step are the youngest and most in need of help of all who make this transfer. By all means, therefore, the granting of employment permits should be part of the work of the vocational bureau. It is here assigned to the placement division of the bureau chiefly because of the desirability of making sure that the job for which the permit is granted is suited to the boy or girl concerned. It is assumed that vocational counseling has preceded application for the permit. It is assumed, also, that enrollment in the compulsory part-time school, if the city has one, is looked after before the permit is issued. It is taken for granted that the pupil is subjected to a thorough physical examination, preferably by a physician who is assigned for certain hours each week to the permit office. The permit officer can see that these things are attended to and other functions of his office performed if he is attached to the placement division, quite as well as if his work constitutes a separate division of the bureau or is attached to one of the other divisions. Certainly it is out of the question to leave the granting of employment permits outside the vocational bureau if the best results are to be secured.

The plan of organization which has been presented in

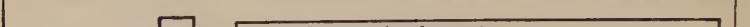
SUPERINTENDENT'S OFFICE
VOCATIONAL BUREAU
PLACEMENT AND PERMIT DIVISION
Care for home service placements
Care for business placements
Care for industrial placements and follow-up
Gather information as to employment opportunities
Grant employment permits
VOCATIONAL EDUCATION DIVISION
Organize and conduct part-time or continuation school work
Prepare for business occupations
Prepare for industrial occupations
VOCATIONAL EXPLORATIONS DIVISION
Advise with counseling and placement divisions concerning vacation try-outs
Supervise vocational try-outs in extra-curricular activities
Organize and conduct commercial arts courses
Organize and conduct household arts courses
Organize and conduct industrial arts courses
VOCATIONAL INFORMATION AND COUNSELING DIVISION
Submit reports to placement office concerning individual pupils
Provide individual counsel for pupils and former pupils
Bring together in the counselor's office educational, psychological and social data concerning pupils
Give occupational information courses
Edit and prepare information for use in the schools
Gather information concerning occupations and concerning vocational education opportunities

CHART 1.

the preceding pages can be seen at a glance in the accompanying chart.

At first thought this plan of organization may appear very elaborate and expensive, wholly impossible for a city of moderate size and more elaborate than necessary even for a city of half a million population. It should be noted, however, that many of the activities included in the plan have long had a place in all city school systems, while the rest are already found in some stage of development in the more progressive school systems of the country. The principal thing done here is to bring these activities into such relations to one another that a more effective job of vocational guidance can be done. It is assumed, of course, that smaller school systems will simplify the plan of organization without losing sight of the different functions to be performed.

It may be argued that industrial arts courses, business education, granting employment permits, or some other of the activities do not properly belong in this plan of organization for vocational guidance. The answer is that any activity of the school system, the principal purpose of which is or should be to aid pupils in making a successful transfer from school to wage-earning occupations, is properly a part of the vocational bureau, since this is the bureau's business. If some of these activities have other purposes also, there is no good reason why these other purposes may not be realized as well under the vocational bureau as they are now.

QUESTIONS AND EXERCISES

1. What are the advantages and disadvantages of placing the vocational guidance program of a city school system in charge of (*a*) The Bureau of Research? (*b*) The Bureau or Department of Attendance? (*c*) A Bureau of Curriculum Development? (*d*) A Vocational Guidance Committee? (*e*) The Principal of the Continuation School?

2. Account for the variety of organization for vocational guidance now existing in the school systems of the larger cities of the United States.

3. Read carefully the list of administrative and supervisory activities of a comprehensive vocational guidance program as given on pages 190–192 and then state whether you think a special bureau to have charge of vocational guidance is justifiable. Give reasons for your conclusion.

4. How would the organization proposed in this chapter function in making information concerning local occupations available for use in the schools?

5. There is a tendency in some cities for principals of junior and senior high schools to assign so many administrative duties to vocational counselors that they have little time left for the real work of counselors. Is this likely under the plan here proposed? Give reasons for your answer.

6. Specify some of the improvements in the vocational exploratory courses of the school system which it seems reasonable to expect from efficient carrying out of the plan of organization presented in this chapter.

7. Take the program of extracurricular activities in the junior and senior high schools of some city and point out ways in which the vocational exploratory values of this program might be increased by the plan of supervision proposed in this chapter. Does this plan involve sacrificing those values of extracurricular activities which are not vocational exploratory in character?

8. Is it practicable to place the vocational preparatory work for both business and industry in charge of the same individual?

Why or why not? Is it usually done? How may it be done without prejudice to the interests of the business or industrial education provided?

9. In many school systems, employment permits are granted by the attendance department. Why should this work be transferred to the vocational bureau?

10. Does this plan of organization lend itself to effective follow-up work or employment supervision? If so, how?

11. Point out ways in which the vocational bureau would have relations with other parts of the school system.

12. How would this plan of organization and administration need to be modified for a smaller city?

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CHAPTER XI

STANDARDIZED TESTS IN A VOCATIONAL GUIDANCE PROGRAM

We have seen that a counselor who undertakes to advise or assist a pupil in choosing a suitable occupation needs to know a great deal about that pupil's characteristics, limitations, and achievements. Especially does he need to have information upon such points as the pupil's general intelligence, special aptitudes, and personality. And when the pupil comes to the point of leaving school to begin wage-earning in the occupation of his choice, both the counselor and the placement officer are concerned with the level of achievement he has reached in preparation for that occupation.

It is obvious, therefore, that the character and reliability of evidence upon these matters is of extreme importance and that vocational guidance workers must be keenly interested in any tests or measuring devices which contribute to making the evidence more accurate and reliable.

School attainment as a test of general intelligence. In this connection it should be kept in mind that school attainment long was the only generally accepted measure, and still is an important measure, of certain of these qualities, particularly of general intelligence. And it must be recognized that, taking pupils as a whole,

school attainment has proved a fair test of this quality. Those who pass from grade to grade with little or no difficulty until they graduate from high school, taken as a group, are undoubtedly superior in intelligence to the group consisting of those who drop out before reaching the goal of graduation. The school is a selective agency which sifts out smaller intellects. Many employers recognize this and insist upon employing only high school graduates, not so much because of the superior training of these but because they have gone through a selective process which has tested their intelligence and certain other qualities that the employer considers important. But the school functions far from perfectly as a sieve of intelligence. A considerable number of very capable boys and girls find their way in some manner through its meshes, while others of very mediocre ability stay in throughout the high school period. Besides, in counseling one does not know generally which pupils will remain through high school and which will drop out at the various stages along the way. The counselor has to deal with differences in intelligence among those who are in school at any given time. And every teacher knows that differences in intelligence among the pupils of a given class are far greater than differences in the grades they receive in school subjects would indicate. It is highly desirable, therefore, that for vocational guidance purposes the school attainment of pupils should be supplemented by a more accurate and less subjective measure of general intelligence.

School subjects as tests of special aptitudes. It should be kept in mind also, as was brought out in

Chapter VI, that try-out experiences provided by the school are for the purpose of giving the pupil a chance to test his aptitudes for and interests in specific occupations or in occupational fields; and that school subjects not offered for try-out purposes often bring out special aptitudes of pupils for particular lines of work. But the counselor usually receives very meager and, to a large extent, subjective reports upon the results of these experiences. And there are many occupations of importance for which aptitudes and interests are not now tested by any school program of exploratory experiences. The element of time required to put a pupil through a try-out course in satisfactory manner must also be taken into account. Valuable as try-out experiences are for testing special aptitudes and interests, the alert counselor must often wish that it were possible for pupil *A* to be given a standardized objective test or group of tests in order to determine whether he has any special aptitude or lack of aptitude for occupation *X* in which he is interested. As a matter of fact the question has been raised in some quarters whether it may not in time be possible to substitute a series of tests of this character, with immense saving of time, for the exploratory experiences now provided in special courses.

Subjective ratings of personality traits inadequate. When the question of personality and character traits is under consideration, the counselor sometimes receives from teachers their estimates of these qualities in pupils. The difficulty is that the best any teacher can do is to give a subjective judgment based upon his experience with the pupil; and the unreliability of individual sub-

jective judgments in such matters is well known. Fortunately, the judgments of several teachers may be obtained and by taking all of them into account a somewhat more reliable estimate may be reached. However, the counselor, and in this case the placement officer too, must often feel the need of a more accurate and dependable measure of these qualities in the pupils with whom they deal.

Vocational achievement ratings often faulty. It is true also that when a pupil comes to the placement office, having obtained more or less vocational preparation, this office is usually supplied with a set of ratings given the pupil by his teachers and covering the different subjects which he pursued. These ratings are measures of achievement in various aspects of the occupation for which preparation has been made — results, perhaps, of a prolonged period of testing. But these ratings, while they have value, are subject to that same element of unreliability always present in subjective judgments. The placement officer must often wish he were able to say to a prospective employer something as definite as: "This boy, in a series of standardized objective tests covering the aspects of his trade which are listed below, obtained a rating of 83 per cent, which places him among the highest tenth of those who have completed in this city the course of training that he has pursued."

It is, then, with recognition on the one hand that we long have had measures of the qualities in which we are interested and of pupil achievement — more or less crude measures to be sure but useful nevertheless — and with ample evidence on the other hand that much

more accurate and reliable measures are needed, that one approaches the problem of standardized objective tests in a vocational guidance program.

Four types of tests to be considered. In the discussion that follows, the four types of tests already suggested will receive brief consideration: (I) general intelligence tests; (II) special aptitude tests; (III) tests of personality and character traits; and (IV) tests of achievement or proficiency along specific lines.

I. General Intelligence Tests

Accuracy and reliability of intelligence tests. Standardized tests of general intelligence are comparatively new. Only a little more than two decades have passed since the French psychologist, Binet, presented to the world his first scale for this purpose. When we consider the complex nature of the thing to be measured, the newness of the effort to provide a suitable measuring instrument, and the carelessness and inexperience of many who have attempted to use this instrument, it is not surprising that there is still much popular skepticism as to the accuracy and reliability of these tests. To be sure, no one claims for them that they can be applied to any human mind with the accuracy attained in linear measure. But anyone who investigates the matter in a thorough, scientific manner must grant that a well-chosen intelligence test properly administered and scored is a better measure of native intelligence than school records or anything else yet devised, and that such a test has the great advantage of requiring only a brief time to obtain the result. It should be

remembered that as simple an instrument of measurement as the yard stick required decades of time and even a royal decree to bring it general acceptance as a standard of measure.

What intelligence tests do. Let us note first what intelligence tests attempt to do and then consider the significance of these things for vocational guidance.

Intelligence tests seek to discover and grade differences in general native capacity between individuals. Outstanding differences, such as those between the idiot and the genius, have long been a matter of common knowledge. But how great this difference is, what ranges of differences lie between, and how people are distributed between these two levels, were matters of speculation only, until intelligence tests were devised. It is now found that among a large number of people selected at random a few are at the idiot level, a few are at the genius level, and the remainder are distributed according to the normal curve of distribution between these two levels. And by means of an intelligence test given to an individual we are able to tell where that individual is on the scale, how tall he is mentally, as it were, in comparison with people generally.

Terman's results. Terman [1] found, as a result of giving the Stanford Revision of the Binet-Simon Intelligence Tests to 1000 children selected at random that their intelligence quotients were distributed as follows:

The lowest	1%	go to 70 or below;	the highest	1%	reach 130 or above.
The lowest	2%	go to 73 or below;	the highest	2%	reach 128 or above.
The lowest	3%	go to 76 or below;	the highest	3%	reach 125 or above.
The lowest	5%	go to 78 or below;	the highest	5%	reach 122 or above.

[1] Terman, L. M. — *The Measurement of Intelligence*, pp. 78–79.

The lowest 10%	go to 85 or below;	the highest 10% reach 116 or above.
The lowest 15%	go to 88 or below;	the highest 15% reach 113 or above.
The lowest 20%	go to 91 or below;	the highest 20% reach 110 or above.
The lowest 25%	go to 92 or below;	the highest 25% reach 108 or above.
The lowest 33½%	go to 95 or below;	the highest 33½% reach 106 or above.

Making allowance for the fact that boundary lines between the groups mentioned below are arbitrary, Terman suggests the following classification of intelligence quotients:

I. Q.	Classification
Above 140	"Near" genius or genius.
120–140	Very superior intelligence.
110–120	Superior intelligence.
90–110	Normal or average intelligence.
80–90	Dullness rarely classifiable as feeble-mindedness.
70–80	Border line deficiency, sometimes classifiable as dullness, often as feeble-mindedness.
Below 70	Definite feeble-mindedness.

By comparing these two tables it will be seen that, according to Terman, approximately 20 per cent have superior intelligence or better, 60 per cent have average or normal intelligence, and 20 per cent fall below normal in the dull and feeble-minded groups.

Army intelligence tests results. A very similar classification resulted from giving the Army tests of intelligence to 1,700,000 draft soldiers during the World War as will be seen from the familiar table[1] shown at the top of the next page. In discussing these letter ratings Yoakum and Yerkes go on to say:[2]

"A = Very superior intelligence. This grade is ordinarily earned by only four or five per cent of a draft quota. The 'A' group is composed of men of marked

[1] Yoakum, C. S. and Yerkes, Robert M. — *Army Tests*, p. 17.

[2] Yoakum, C. S. and Yerkes, Robert M. — *Army Tests*, pp. 22–23.

Intelligence Grade	Definition	Score	Approximate Per Cent
A	Very Superior	135–212	4.5
B	Superior	105–134	9.0
C^+	High Average	75–104	16.5
C	Average	45–74	25.0
C^-	Low Average	25–44	20.0
D	Inferior	15–24	15.0
D^- and E	Very Inferior	0–14	10.0

intellectuality. 'A' men are of high officer type when they are also endowed with leadership and other necessary qualities.

"B = Superior intelligence. 'B' intelligence is superior, but less exceptional than that represented by 'A.' The rating 'B' is obtained by eight to ten soldiers out of a hundred. The group contains many men of the commissioned officer type and a large amount of noncommissioned officer material.

"C^+ = High average intelligence. This group includes fifteen to eighteen per cent of all soldiers and contains a large amount of noncommissioned officer material with occasionally a man whose leadership and power to command fit him for commissioned rank.

"C = Average intelligence. It includes about twenty-five per cent of the soldiers. Excellent private type with a certain amount of fair noncommissioned officer material.

"C^- = Low average intelligence. This group includes about twenty per cent. Although below average in intelligence, 'C^-' men are usually good privates and satisfactory in work of a routine nature.

"D = Inferior intelligence. It includes about fifteen per cent of soldiers. 'D' men are likely to be fair soldiers, but they are usually slow in learning and rarely go above the rank of private. They are short on initiative and so require more than the usual amount of supervision. Many of them are illiterate or foreign.

"D⁻ and E = Very inferior intelligence. This group is divided into two classes: (1) 'D⁻' men, who are very inferior in intelligence but are considered fit for regular service; and (2) 'E' men, those whose mental inferiority justifies their recommendation for development battalion, special service organization, rejection, or discharge. The majority of 'D⁻' and 'E' men are below ten years in 'mental age.'"

Intelligence ratings and school expectancy. Turning to the significance for vocational guidance of these data which were obtained by Terman from individual tests and by the Committee on the Classification of Personnel in the Army from group tests, and which since have been supported and substantiated in the main by the results of group tests given to hundreds of thousands of school children, it is at once clear that a pupil's intelligence rating must have an important relation to the amount of school, college, and university training which it is practicable for him to undertake.

Terman[1] says: "Those testing 80 to 90 (I.Q.) will usually be able to reach the eighth grade, but ordinarily only after from one to three or four failures." Referring to those who possess average intelligence (I.Q. 90 to 100) he says: "The high school does not fit their grade of intelligence as well as the elementary

[1] Terman, L. M. — *The Measurement of Intelligence*, pp. 93–94.

and grammar schools. High schools probably enroll a disproportionate number of pupils in the I.Q. range above 100. That is, the average intelligence among high school pupils is above the average for the population in general. It is probably not far from 110. College students are, of course, a still more selected group, perhaps coming chiefly from the range above 115." It will be recalled that according to Terman about 20 per cent have an I.Q. of 90 or less and about 80 per cent have an I.Q. of 110 or less.

In discussing the same point in terms of the Army Alpha test, Yoakum and Yerkes say:[1] "The immense contrast between 'A' and 'D⁻' intelligence is shown by the fact that men of 'A' intelligence have the ability to make a superior record in college or university, while 'D⁻' men are of such inferior mentality that they are rarely able to go beyond the third or fourth grade of the elementary school, however long they attend. In fact, many 'D⁻' and 'E' men are of the moron grade of feeble-mindedness. 'B' intelligence is capable of making an average record in college. 'C⁺' intelligence cannot do so well, while mentality of the 'C' grade is rarely capable of finishing a high school course."

The conclusions expressed by Terman and by Yoakum and Yerkes are substantiated by later investigations, only two of which can be referred to here. In an unpublished study of the general intelligence of pupils who complete different grades, made by the Department of Special Education of the Detroit School System, results given in the following table were

[1] Yoakum, C. S. and Yerkes, R. M. — *Army Mental Tests*, p. 23.

obtained. The tests used were the Detroit Alpha Intelligence Tests, a modification of the Army Alpha Test. The table presents results obtained in January 1926 from 2469 pupils who then completed the sixth grade, 2198 who completed the eighth grade in eight-grade elementary schools, 610 who completed the ninth grade in three intermediate or junior high schools, and 1085 who completed the twelfth grade.

Grade Completed	Per Cent Making Each Score						
	A	B	C+	C	C−	D	E
6th	11	13	16	23	15	11	11
8th	16	15	19	23	14	9	4
9th	23	22	20	20	9	4	2
12th	48	31	15	5	1		

It will be noted that of those completing the 6th grade 40 per cent were above the average "C"; of those completing the 8th grade, 50 per cent; of those completing the 9th grade, 65 per cent; and of those completing the 12th grade, 94 per cent.

Proctor's[1] report upon 131 pupils who entered high school and stayed long enough to make any scholastic record shows that 101 graduated, of whom 65 were very superior, superior, or above average in intelligence as measured by the Stanford Revision of the Binet-Simon individual tests. Of the remainder, 27 were average and 9 below average.

A vocational counselor, therefore, must accept a

[1] Proctor, William Martin — *Educational and Vocational Guidance*, p. 31.

pupil's intelligence rating, if properly determined, as reliable evidence of the amount of schooling the pupil may be expected to obtain. To be sure the counselor will weigh this evidence in connection with other evidence, particularly the pupil's previous school record. If there is a marked difference between the intelligence rating and the school record, arrangements should be made for the pupil to be given another intelligence test, preferably an individual test, as a check upon the result obtained in the first one. The counselor will recognize, also, that one individual may have more " drive " or persistence than another whose intelligence is the same, and that on this account the former may be able to go farther in his schooling than the latter. But when all allowances are made, it will still be found that the intelligence rating is a valuable aid in advising a pupil whether to continue his schooling along academic lines, or to change to a vocational preparatory course, or to drop out of school and enter a wage-earning occupation. The significance of this for vocational guidance is realized more fully when one recalls that certain occupations require several years of technical preparation which must be preceded by two, three, or four years of college work. An individual whose intelligence rating is " C⁻" or even " C " by the Army Alpha test, for example, should be shown the chances against his succeeding in one of these occupations. A four-year college course, to say nothing of the technical work which follows it, is almost sure to be far beyond his limit of school attainment. And yet it was found in a recent unpublished study of occupational choices in relation to intelligence that 51.5 per cent of inter-

mediate or junior high school boys who aspired to the professions have intelligence ratings of " C+ " or lower by the Detroit Alpha tests.

Intelligence ratings in different vocations. From what has been said it is apparent that a pupil's intelligence rating has an important relation not only to his school expectancy but also to the general type of occupation which he should enter. To a certain extent, the latter is dependent upon the former because of the amount of schooling involved in preparing for certain occupations, notably the professions. But there are still more fundamental reasons why an individual's intelligence should be taken into account in connection with his choice of occupation. These reasons can be discussed to better advantage after examining the chart on the next page, which shows the relation of intelligence to occupation as studied in the army for 18,423 men.[1] The authors point out that the data are not comparable with those which would be obtained from civilian groups because of various selectional factors which appear in the army. Nevertheless, there is evidence that the relative positions of the large occupational groups would be the same though important changes within the groups would no doubt appear if a similar number of civilians were studied.

Fryer [2] marks off quite definitely five occupational levels as follows:

I Professional occupational level. (Superior intelligence required.)

[1] Yoakum, C. S. and Yerkes, R. M. — *Army Mental Tests*, p. 198.

[2] Fryer, Douglass — *Occupational Intelligence Standards, School and Society*, Vol. XVI (1922), p. 276.

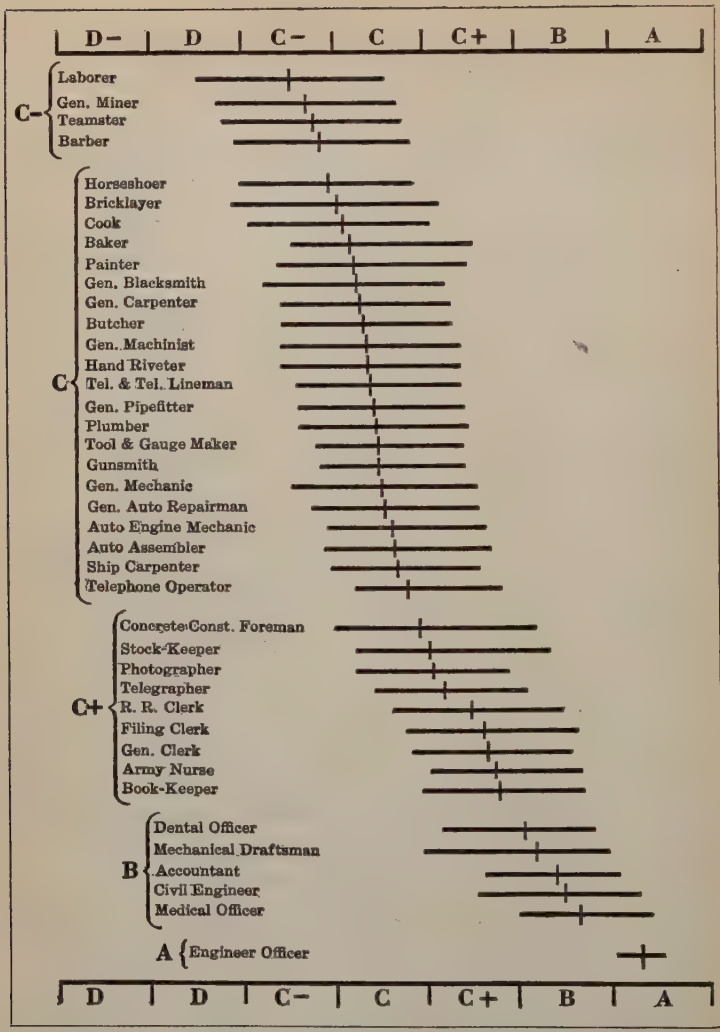


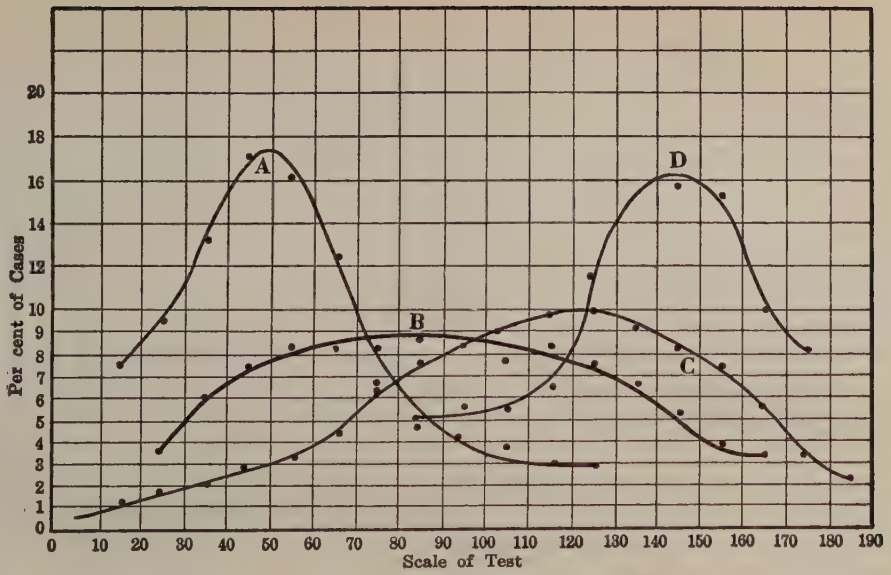
CHART 2. — "Occupational intelligence standards. Based on data for 18,423 men. Data taken from soldiers' classification cards. Length of bars shows range of middle 50 per cent. Vertical crossbar shows position of median." — Yoakum and Yerkes, *Mental Tests*. Holt.

II Technical occupational level. (High average intelligence required.)
III Skilled occupational level. (Average intelligence required.)
IV Semi-skilled and low-skilled occupational level. (Low average intelligence required.)
V Unskilled occupational level. (Inferior intelligence required.)

Fryer has gone so far as to make a list of 96 occupations for each of which he gives the intelligence group, the score average, and the score range in terms of the Army Alpha tests. For example, for an accountant the intelligence group is " A," the score average is 137, and the score range is 103–155. For a chauffeur the intelligence group is " C," the score average is 65 and the score range is 43–91. According to Fryer this means that a man who wishes to be a chauffeur will stand the best chance of " achievement in the occupation " if he ranks in intelligence group " C," has an intelligence rating above 65, and is neither below 43 nor above 91.

In another publication, Yoakum [1] reports results of an extensive study of mental alertness among salesmen, conducted by the Bureau of Personnel Research of the Carnegie Institute of Technology. There were four groups of salesmen considered: *A*. counter sales people in retail stores; *B*. wholesale salesmen to retail stores; *C*. insurance salesmen; and *D*. salesmen requiring training at a technical college. The average mental alertness score of group *A* was 51; of group *B*, 89; of group *C*, 112; and of group *D*, 139. The accompany-

[1] Yoakum, C. S. — *Basic Experiments for Scientific Selection*, Vol. 4, No. 3 (Jan. 1922), p. 12.



TYPES OF SALESPEOPLE

A. Counter Salespeople
B. Wholesale Salesmen to Local Retail Stores
C. Insurance Salesmen
D. Salesman Requiring Training at a Technical College

CHART 3.

ing chart shows the distribution of mental alertness scores of the four groups.

Significance of intelligence ratings for vocational counseling. From the above evidence it is obvious that one individual may choose an occupation in which the great majority of workers have a higher degree of intelligence than he possesses, while it is quite as possible for another to choose an occupation in which the great majority of workers have a markedly lower general intelligence rating than his. Entry into the occupation in either case is likely to prove unfortunate, though in the former case, especially if the occupation chosen lies in the professional field, the many educational hurdles to be encountered make actual entry improbable. Generally, however, it is far better to avoid the waste of time and energy and the bad psychological effects of repeated failures to pass the hurdles. And if such an individual actually succeeds in entering the occupation he gives himself an enormous handicap in his efforts for success in that he has placed himself in competition with a group of men and women more intelligent than himself.

On the other hand, the one who enters an occupation which is definitely below his level of intelligence will usually find that neither the work nor the associations bring him satisfaction. He either seeks another occupation or becomes a routine worker who finds satisfaction outside of his work rather than in it. Scott and Clothier [1] show quite conclusively that, under certain circumstances, labor turnover depends very directly upon the relation of mental alertness of the worker to

[1] Scott and Clothier — *Personnel Management*, pp. 465–468.

the work done. In one company, for example, they found a good degree of stability among clerical workers whose mental alertness or general intelligence rating was between 35 and 50, while there was high turnover among those whose rating was decidedly below 35 or decidedly above 50. Those in the low group appeared to be unable to meet the requirements of the work. In this particular case lack of a suitable promotional policy made it impossible to hold many of those whose intelligence ratings were comparatively high. The same authors report, concerning another establishment, that in the tool department where the work is high-grade and varied, 83 per cent of the men who were retarded five years in school progress (amount of retardation being taken as a measure of mental alertness since results of intelligence tests were not available) desired change of work. On the other hand, in the inspection department, where the work is largely "fool proof," repetitive, and monotonous, the amount of dissatisfaction was very low among those who were very retarded in school while 90 per cent of those whose progress in school was normal expressed a wish for some other kind of work.

It would be highly desirable, to be sure, to have more complete evidence than is yet available as to the intelligence requirements of different occupations. Indeed Terman predicted several years ago that ultimately research will determine the minimum intelligence quotient necessary for success in each leading occupation. This much desired goal is still far from realization, though there has been progress in that direction. However, there is already, as we have seen, sufficient

evidence of this general character to make it necessary for the vocational counselor to ascertain the pupil's intelligence rating and take it into account when considering his fitness or unfitness for any specific occupation.

Other factors to be considered. On the other hand, the counselor should not lose sight of the fact that general intelligence, important as it is, is only one of several factors to be considered. Social intelligence and motor intelligence, as Thorndike calls them, which are sometimes included under the term "special aptitudes", or other qualities of personality or character may be possessed by the pupil to such degree as to compensate for a slight, or, in some cases, a considerable shortage of general intelligence.

Giving intelligence tests not a guidance function. The actual work of determining general intelligence ratings of pupils is not the business of the vocational bureau. This is a highly technical undertaking which concerns all grades in the school system from the kindergarten up and which is usually in charge of a special bureau with a staff of trained specialists. The vocational bureau is concerned with the results of the tests, not with their technique. The results usually come to the counselor on the pupils' cumulative record cards at the beginning of the seventh grade. If counselor or placement officer finds it desirable for a pupil or a group of pupils to be given an intelligence test, the arrangement is generally made by the director of the vocational bureau with the one who is in charge of administering the school system's program of tests and measurements.

II. Special Aptitude Tests

The function of special aptitude tests. Because an individual has a general intelligence rating near the median of those who are successfully engaged in an occupation which interests him, it does not follow that he will succeed in that occupation. It means merely that he possesses one fundamental quality without which he would be unsuited to, or handicapped in, that occupation. It may be that he lacks other qualities that are required for success in this particular work but possesses qualities that are required in some other occupation in which the necessary intelligence level is approximately the same. This brings us to the field of special aptitude tests.

Both general intelligence tests and special aptitude tests attempt to measure native capacity, but the former deals with its general aspects while the latter deals with its special aspects. By means of the former, it is possible to say that an individual has the intelligence required for success in any one of a considerable group of occupations. By means of the latter, we seek to determine to what extent he possesses the special qualities which make it possible for an individual to do successfully and without undue strain the things which distinguish one occupation from others of the group. A few illustrations from widely different types of occupations will make clear the character of special aptitude tests.

Tests for shell inspectors. Link [1] gave a series of tests to seventy-three girls employed in a munitions plant. Fifty-two of the girls were inspectors and

[1] Link, H. C. — *Employment Psychology*, Chapter III.

twenty-one were gaugers. He then found the correlations between the scores made by the girls who were inspectors and the average number of pounds of shells inspected per hour over a period of four weeks. Also he found similar correlations for the gaugers. The following results were obtained:

Tests	Correlations	
	inspectors	gaugers
Card sorting	.55	.05
Tapping	.14	.52
Cancellation	.63	.17
General intelligence . . .	.14	.18
Number group checking . .	.72	−.19

From this experiment Link concluded that high scores made by an individual in the card-sorting, cancellation, and number-group-checking tests indicated probable success as an inspector, while only the tapping test had any significance in the selection of gaugers.

In summarizing all his experiments in this field, which involved giving the tests that he found significant to more than 2900 applicants for the work of inspection and to a considerable number already engaged in this work, Link says: "It was found (1) that the verdict of the foreman tended to bear out that of the tests; (2) that of a certain group studied intensively, ninety-four per cent of the successful workers were above the standard in the tests, and all failures were failures also in the tests; (3) that those who passed the tests worked (that is, were continuously employed as inspectors) almost ten times as long as those who did not."

It should be noted that shell inspection is highly specialized, repetitive work, which requires ability to observe defects quickly, and to throw out deftly the defective shells. One who is suited to the work can become quite proficient in a few days.

Tests of musical talent. Tests to determine a very different kind of aptitude, or the lack of it, were developed by Seashore. As long ago as 1916 this well-known psychologist, after many years of experiment and study, established a clinic at the University of Iowa for testing musical capacity. Describing this undertaking, he says:[1] "It is now possible to make reliable and fairly complete measurements of the fundamental capacities which constitute musical talent early enough to serve as a guide in the selection of a musical career. The measurement of musical talent is not one measurement but a large number of measurements which must be built up into a system so as to represent fairly the most salient features of musical talent. It is necessary, for example, to know the sensitiveness of the ear to tones, the musical imagination, the musical memory, the musical intellect, the musical feeling, the time-sense, the sense of rhythm, and the sense of harmony and melody, which are capacities involved in the hearing and appreciation of music. Likewise it is necessary to know the corresponding facts about the ability to express music in singing and playing. Different instruments require different kinds of talent.

. . . . . .

"In brief, the examiner should be able to state on

[1] Seashore, Carl E. — "Vocational Guidance in Music," *University of Iowa Monographs, First Series, No. 2.*

the basis of scientifically observed facts, what kind of musical training and achievement, if any, the pupil is adapted for and what is the probable extent of achievement and rate of progress."

In a book[1] published some years later, Seashore presents the following list of factors of the musical mind:

I. **Musical Sensitivity.**
   A. *Simple forms of impression.*
      1. Sense of pitch
      2. Sense of intensity
      3. Sense of time
      4. Sense of extensity
   B. *Complex forms of appreciation.*
      1. Sense of rhythm
      2. Sense of timbre
      3. Sense of consonance
      4. Sense of volume

II. **Musical Action.**
   Natural capacity for skill in accurate and musically expressive production of tones (vocal, instrumental, or both) in:
      1. Control of pitch
      2. Control of intensity
      3. Control of time
      4. Control of rhythm
      5. Control of timbre
      6. Control of volume

III. **Musical Memory.**
      1. Auditory imagery
      2. Motor imagery
      3. Creative imagination
      4. Memory span
      5. Learning power

[1] Seashore, Carl E. — *The Psychology of Musical Talent.* Silver, Burdett and Company.

IV. **Musical intellect.**

1. Musical free association
2. Musical power of reflection
3. General intelligence

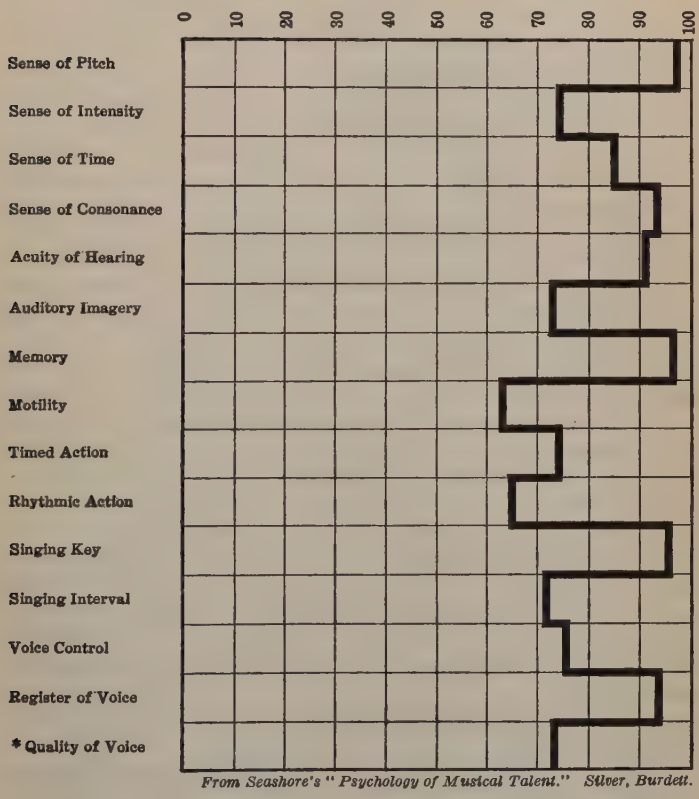
V. **Musical feeling.**

1. Musical taste
2. Emotional reaction to music
3. Emotional self-expression in music

Considering for the moment a single factor in this list, Seashore found that one individual may be 200 times as keen as another in pitch discrimination. He concludes that, other things being equal, the best 10 per cent in pitch should be stimulated enthusiastically to develop their musical talent; the next 20 per cent should be encouraged freely; the next 40 per cent should be encouraged; the next 20 per cent should be questioned; and the last 10 per cent should be discouraged. Of course Seashore is thinking here not only in terms of a musical career but also in terms of musical appreciation and amateur performance.

Seashore cites the case of one girl, who had had considerable musical training and achieved local success as a singer who made a high score in his tests, taken as a whole. This girl was greatly encouraged and stimulated in her efforts towards a musical career by the showing she made in the tests. Another girl of poor family who had had no training made an exceptionally high score in the tests, and was given training opportunities as a result. A young man upon whose musical " education " considerable money and effort had been expended with insignificant results was found to be hopelessly deficient in several of the most important

factors covered by the tests. The accompanying charts show the scores made by two men whom Seashore calls "Mr. White" and "Mr. Black."

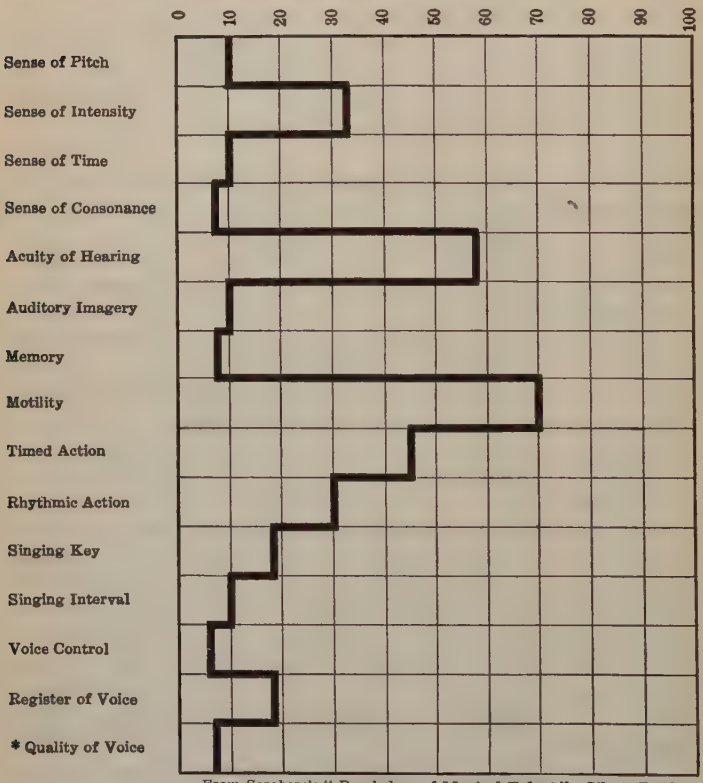


From Seashore's "Psychology of Musical Talent." Silver, Burdett.

CHART 4. — MUSICAL TALENT CHART OF "MR. WHITE."

Of Mr. White, Seashore says: "In general Mr. White has an unusually strong and well-balanced musical mind, ranking in this respect among the best three per cent in a normal community. He has always manifested great

interest and activity in music, but has had only a small amount of formal training. He lives in a tonal world and is emotionally responsive to music." [1]



From Seashore's "Psychology of Musical Talent." *Silver, Burdett.*

CHART 5. — MUSICAL TALENT CHART OF "MR. BLACK."

Concerning Mr. Black the following comment is made: "So far as musical resources are concerned, his record

[1] Seashore, Carl E., *The Psychology of Musical Talent.* Silver, Burdett and Company, 1919, p. 23.

is remarkable for its uniform inferiority. He has taken music lessons but has met with failure. He shows only a perfunctory interest in music. This record removes all necessity for uncertainty and pretense." [1]

A number of attempts have been made to test aptitude for the work of a typist. By far the most comprehensive investigation in this field is that of Muscio and Sowton [2] in London. They gave a series of tests to 220 subjects in several groups, all of whom possessed more or less experience in typewriting. Correlations were then found between the rank of the subjects in the tests and their rank in proficiency in the groups to which they belonged. These investigators concluded that the following tests which they used showed sufficiently high correlations to be of some significance in discovering aptitude for typewriting:

1. A test of immediate memory span. (Reproducing sentences immediately after they are read.)
2. A test in carrying out directions.
3. A finding test. (Finding products of pairs of two-place numbers from a table.)
4. A completion test, in which appropriate words must be supplied to fill in blank spaces in a sentence.
5. A test of spelling (which is a test of acquired ability rather than aptitude).

It seemed probable, also, that a test of speed of association would be valuable.

The present situation, as far as tests for aptitude in typing and stenography are concerned, is well sum-

[1] Seashore, Carl E., *The Psychology of Musical Talent.* Silver, Burdett and Company, 1919, p. 25.

[2] Muscio, B. and Sowton, S. C. M. — "Vocational Tests and Typewriting," *The British Journal of Psychology*, April, 1923. Vol. 13, pp. 343–369.

marized by Kornhauser and Kingsbury [1] as follows: "Enough work has been done to open up a promising field for research. We would advocate the use of tests for typing and stenographic aptitude — but only in case the emphasis is placed upon *testing the tests* and not upon using the results for the present as measures of the applicant's aptitudes." In other words, the entire matter is still in the field of experiment and research.

In several other occupational fields, attempts have been made to develop tests of special aptitudes. The Bureau of Public Personnel Administration [2] has been working since 1924 upon the improvement of tests devised for selection of patrolmen. Among the qualities tested are accuracy of observation; memory for oral directions, for description, and for faces; and social intelligence. Kitson,[3] who though skeptical of their value discusses the subject of aptitude tests at some length, gives a bibliography of tests that have been proposed for the measurement of vocational aptitudes. The following occupations are listed: aviator, calculating machine operator, clerical worker, dressmaker, engineer, hairdresser, journalist, musician, printer, railway worker, salesman, stenographer and typist, street-car motorman, telegraph operator, and telephone operator.

Toops [4] has been carrying on for some time an investi-

[1] Kornhauser and Kingsbury — *Psychological Tests in Business*, p. 107.

[2] *Public Personnel Studies*, April 1926, pp. 122–151.

[3] Kitson, Harry Dexter — *The Psychology of Vocational Adjustment.*

[4] Toops, Herbert A. — "Tests for Vocational Guidance of Children Thirteen to Sixteen," *Teachers College Contributions to Education*, No. 136, 1923.

gation which has for its purpose to develop tests that will "be of value in predicting fitness for various careers." His work is with children thirteen to sixteen years of age. However, he is giving attention to fitness for a group of occupations rather than for specific occupations, his tests being of three types: (1) those which test ability to deal with ideas and symbols for ideas; (2) those which test ability to deal with things and mechanisms; and (3) those which test ability to deal with clerical items and procedures. The Stenquist tests, also, with which guidance workers should be familiar, are designed to test aptitude for the mechanical group of occupations rather than for any one occupation.

Methods used in devising aptitude tests. A method of devising aptitude tests which has met with some success is the empiric method. The investigator takes a group of tests of any sort that he thinks might be useful, gives them to a considerable number of workers of known ability in the occupation under investigation and then determines which tests show a high correlation with occupational proficiency. Tests showing a high correlation are considered suitable for selection of new workers. Link used this method in selecting shell inspectors.

The method of devising special aptitude tests which seems likely to make the largest contribution to vocational guidance is that which involves a careful analysis of the occupation into its elements. It is then determined what psychological qualities are important in connection with each element, and individuals are tested for these qualities. This is substantially the

plan followed by Seashore. It is, of course, necessary to determine the validity of the test by giving it to a considerable number of people who are already engaged in the occupation and whose efficiency has been reliably rated. Only in case there is a high correlation, with small probable error, between performance in the test and performance in the occupation can one conclude that the test is valid.

An interesting illustration of this method is found in the tests for dressmakers' apprentices used by Miss Spielman[1] in London. As a result of careful analysis she came to the conclusion that the psychological factors determining efficiency in dressmaking are: (1) speed of work — maximum speed, customary speed, ratio of maximum speed to customary speed, and resistance to distraction; (2) quality of work — accuracy, perception of equal distances, memory of length, form, and color, coördination of hand and eye and hand and image, and lightness of touch; and (3) independence of forewoman's supervision — memory for complicated instructions, and observation. The tests for maximum speed included drawing circles at maximum speed, threading beads at maximum speed, pricking with a mounted needle at maximum speed, and knotting wool at maximum speed. It will be observed that the processes involved in dressmaking were avoided in these tests. The same was true of the tests used for customary speed, for perception of equal distances, for memory of length, form, and color, and for the other

[1] Spielman, Winifred — "Vocational Tests for Dressmakers' Apprentices," *The Journal of the National Institute of Industrial Psychology*, Vol. 1, No. 7, July, 1923.

qualities listed above. A correlation of .78 was found between the results of the tests and the trade mistress's ranking of the girls who took them.

Looking at the matter from another angle, it obviously would be a great advantage if, on the one hand, each pupil could be tested for and rated in the entire range of important psychological qualities and, on the other hand, each occupation could be analyzed into its elements and the psychological quality most important for each element determined. This would make available at any time a psychograph of each individual pupil for comparison with, if the term may be permitted, the psychograph of any particular occupation in which he may become interested. However, the Swiss psychologist, Claparède,[1] holds that: "Psychological analysis of the subject and determination of his separate mental functions may or may not give an accurate estimate of his aptitude for an occupation. The accuracy of the estimate is a new question which can only be settled by experience. The great majority of occupational operations require the coördination of these elementary functions. The possession of these abilities and the power to coördinate them are two different things."

Present status of aptitude tests in guidance work. Much to be desired as suitable tests of special aptitudes are, it must be admitted that we are still far from the time when the vocational bureau of a city school system can make extensive use of tests of this type for guidance purposes. The number of occupations for which such

[1] Claparède, Edouard — *Problems and Methods of Vocational Guidance*, p. 51. Published by the International Labour Office, Geneva.

tests have been developed is extremely small in comparison with the number of occupations listed by the United States Census. Few of the tests that have been developed have, as yet, proved their value. Preparing and validating tests of this character is an undertaking of such magnitude that further progress along this line must of necessity be slow. And even after a large body of suitable tests is developed there remains the task of providing sufficient laboratory facilities and psychological staff to give the tests to large numbers of pupils. It must be recognized that up to the present time, tests of special aptitudes have proved more useful in selecting workers for particular jobs than in aiding individuals to choose their occupations.

Nevertheless, directors of vocational guidance and their assistants should keep themselves informed as to developments in this field, encourage and participate in experimental work, and be ready to introduce such tests of special aptitudes as, from time to time, may prove their worth and be found practicable to administer in a school system.

An illustration of this attitude is found in the Detroit school system, where Alex C. Crockett, of the placement office, is trying out tests of motor speed, motor control, manual dexterity, mechanical ingenuity, and ability to carry out instructions, with twenty-eight apprentice toolmakers in a large manufacturing plant; and following up each apprentice over a period of years in order to determine the degree of correlation between ratings in the tests and achievement in the trade. When new apprentices are employed, they are selected from the school placement office list on the basis of their

showing in the tests, their general intelligence also being taken into account. Employers and labor union officers are asking that similar methods be applied to the selection of apprentices for printing and for certain of the building trades.

III. Tests of Personality Characteristics

Other factors involved in vocational success. Everyone recognizes that vocational success depends upon other factors as well as upon general intelligence and special aptitudes. Cattell,[1] in speaking recently of intelligence tests, said: "When applied to school children these tests indicate what the children *can* do better than what they *will* do." Proctor[2] found that among 131 high school pupils whom he studied, the very dullest with an I.Q. of 79 had an average scholastic record of C^+, which was exactly the same as that of the second brightest of the group whose I.Q. was 137. In a general way Cattell's statement will apply to aptitude tests also, as these develop, though probably in a lesser degree since one is more likely to be interested in doing the things for which he possesses a special aptitude. But interest is only one of several additional factors that must be taken into account. "Will-temperament," emotional stability, initiative, ambition, personal disposition, and a whole group of character traits including industry, honesty, conscientiousness, dependability, courtesy, coöperativeness, and loyalty must always be recognized as of great

[1] Cattell, J. McKeen — Address before Psychological Section, Am. Assoc. for Adv. of Science, 1924.

[2] Proctor, William M. — *Educational and Vocational Guidance*, p. 41.

importance. It will be observed that some of these qualities are innate while others are composites of heredity and environment.

Numerous attempts have been made to develop and standardize tests which will measure certain of these qualities. Limited space forbids more than brief consideration of such tests here.

The Downey tests of will-temperament. Notable among the tests of personal qualities are those developed by Downey [1] for testing what she calls the will-temperament, and which she defines as the innate relatively permanent dynamic pattern of the individual. The phases of the dynamic pattern which she considers most important, and with which she concerns herself are: "(1) those of speed and fluidity of reaction; (2) those of forcefulness and decisiveness of reaction; (3) those of carefulness and persistence of reaction." She devised a group of four tests for each of these three phases of activity. The first group, which she calls speed-tests, includes tests of Speed of Movement, Freedom from Load, Flexibility, and Speed of Decision. The second group, which she calls tests for aggressiveness, is composed of tests of Motor Impulsion, Reaction to Contradiction, Resistance to Opposition, and Finality of Judgment. The third group, which she designates as tests of carefulness and persistence, is made up of tests of Motor Inhibition, Interest in Detail, Coördination of Impulses, and Volitional Perseveration. The tests may be given to

[1] From Downey, *The Will-Temperament and Its Testing*, pp. 60, 62–63. Copyright 1923 by The World Book Company, Publishers, Yonkers-on-Hudson, New York.

individuals or to groups, though results are more satisfactory from individual testing, just as is the case with tests for general intelligence.

Use of will-temperament tests for guidance purposes. As illustrating how these tests may be used to supplement intelligence tests Downey [1] gave the will-temperament tests to thirty-four college freshmen who had been given the Thorndike intelligence examination for high school graduates and who had been classified into the four groups suggested by Thorndike: Group I, those who might be safely admitted into college in spite of gross deficiencies in preparation; Group II, those able to do good academic work; Group III, those with enough intellect to attain a college degree if they are earnest and industrious; and Group IV, those who are unsuitable material for a college education. She then followed the academic achievement of these students through two quarters of their freshman year. Downey summarizes her results as follows: "Students with a high intelligence rating but a low will-temperament score usually succeed academically, although not to the degree warranted by their intelligence, and, with certain combinations of traits, may fail. Students with a low will-temperament score, who are rated in either Group III or Group IV for intelligence, fail to make good as students. Students of inferior intelligence but strong temperament qualities may succeed in maintaining a passing grade." [2]

In discussing the uses of will-temperament testing for guidance purposes Downey says: "In giving boys and girls vocational as well as educational advice one

[1] *Ibid.*, p. 270. [2] *Ibid.*, p. 272.

should know much of their temperament peculiarities. One needs above all to reckon with such things as aggressiveness, speed, interest in detail, perseveration. Large demands will be made upon applied psychology of temperament when once it succeeds in establishing itself."[1]

In criticising the Downey tests, Kitson points out that we do not yet have scientific proof that there are general traits like industriousness, aggressiveness, and the like, which can be measured and which express themselves equally pronouncedly in all the activities of the individual; nor are we justified in assuming that precisely these traits are those called for in certain specific vocations. He adds: "Perhaps they are. We cannot assert it, however, until we have measured a number of workers in different vocations and have discovered that successful lawyers, for example, stand higher with respect to the trait designated as 'aggressiveness' than do unsuccessful lawyers, or persons in a vocation said to call for lack of aggressiveness."[2]

Undoubtedly much remains to be done in perfecting and validating will-temperament tests for vocational guidance purposes. Certainly they are still far from practicable as part of a program which should be attempted for all the pupils in the school system, as their author would readily admit. But they constitute a significant step in the effort to measure important aspects of human personality.

[1] From Downey, *The Will-Temperament and Its Testing*, p. 307. Copyright 1923 by The World Book Company, Publishers, Yonkers-on-Hudson, New York.

[2] Kitson, Harry Dexter — *The Psychology of Vocational Adjustment*, p. 179.

Tests of trustworthiness. An interesting attempt was made by Voelker[1] to measure certain character traits among boys who were mostly ten to fourteen years of age. He gave cleverly devised tests of truthfulness, honesty, reliability, persistence in carrying out instructions in spite of distractions, and other qualities, all of which he summed up as trustworthiness, to boys in Boy Scout troops, public schools, and private schools. In all, ten tests were given, in each of which the temptation to be untrustworthy in some respect was presented, with, apparently, no chance of discovery. Voelker's purpose, however, was not to develop tests of these qualities for general use but as an aid in determining whether trustworthiness is increased under such definite training to that end as is provided by the Boy Scout Organization. No effort has been made, so far as the writer is aware, to use these tests for purposes of vocational guidance or placement, though they would appear to have such possibilities, except for the amount of work involved in giving them.

Tests of other qualities. In an effort to reduce accidents among taxicab drivers of the Yellow Cab Company of Chicago by better methods of selection, Snow [2] developed and used tests for recklessness, carelessness, emotional instability, and lack of foresight. A resulting reduction in accidents is evidence of merit in the tests. Numerous other efforts to measure the qualities

[1] Voelker, Paul Frederick — "The Function of Ideals and Attitudes in Social Education," *Teachers College, Columbia University, Contributions to Education*, No. 112.

[2] Snow, A. J. — "Tests for Chauffeurs," *Industrial Psychology*, Vol. 1, No. 1, January, 1926.

which make up personality or character have been made, but lack of space forbids their consideration here.

It must be granted that tests of personality traits, interesting in possibilities as they are, have not yet reached the stage of development where vocational guidance workers can obtain much help from them. Nevertheless, there is a great deal of activity on the part of psychologists along this line. What the developments may be in the near future it is unsafe to predict. It is entirely possible that tests of some of these qualities may soon be devised which will have tremendous significance for vocational guidance. In the meantime guidance workers will find it wise to maintain an open-minded and coöperative attitude towards tests of this character. They will do well, also, to obtain from each of their teachers as careful ratings as possible of personality and character traits of the boys and girls with whom they deal. These are subjective ratings, to be sure, but when obtained for an individual pupil from several teachers they are distinctly worth while.

A good illustration of what may be done with rating scales is found in the organized plan for the continuous rating of junior and senior high school students which has been in use in Pasadena [1] for several years. The plan defines in terms of typical behavior each of twelve important traits: quickness of thought, memory, force of personality, capacity for leadership, initiative-

[1] Hughes, W. Hardin — "A Rating Scale for Individual Capacities, Attitudes, and Interests," *Journal of Educational Method*, 3:56–65, October, 1923.

aggressiveness, control of attention, self-confidence, sense of accuracy, coöperativeness, regularity-persistence, trustworthiness, and respect for authority. For example, the highest rank in regularity-persistency is described as follows: " Is found in the right place at the right time. Works regularly and on time. Completes job before leaving it. Perseveres even when making little progress. Holds tenaciously to worthwhile purposes. Is generally consistent in thought and behavior."

The lowest rank in the same quality is described in the following language:

" Is seldom found in right place at right time. Works sporadically. Habitually leaves job unfinished. Is discouraged by trifling obstacles. Is inconsistent in thought and behavior. Is conspicuous for procrastinating."

The highest rank in coöperativeness carries this description:

" Participates extensively in the worthy group activities. Gives up own preferences when they interfere with the general good spirit and welfare of the group. Is extraordinarily fair-minded and generous. Is democratic. Does not expect special favors or privileges. Seems happy in his work and play with others. Is always ready to do his part in any legitimate coöperative undertaking."

The plan " sets forth the technique of rating individuals in accordance with the method of man to man comparison, and provides for the pooling and the accumulating of ratings so that a composite record is obtained each year based on the judgments of all

teachers with whom the student has carried on work." [1] The composite record of any student is thus made up of ratings given by five or six teachers independently.

In using a rating scale of this kind, it is quite important that the qualities rated should be carefully defined, as was done in Pasadena, and that these definitions should be kept clearly in mind by the teachers in making up the ratings. Hughes points out, also, that the accuracy of the ratings is most nearly insured if only one trait at a time is considered for the individuals of an entire group; that is, if all the members of a class are rated on coöperativeness, for example, and then on each of the other qualities in turn. He adds: "To go down the list of traits in succession for a single individual is almost impossible."

IV. Occupational Proficiency Tests

The nature of occupational proficiency tests. In the main the tests thus far discussed are designed to measure native capacity — one's hereditary endowment. The one notable exception is the tests of character traits which are intended to measure what the individual has done, under the environment to which he has been subjected, with certain of his native capacities. All these tests, those of character traits as well as those of general intelligence, special aptitudes, and personality, are primarily prognostic in their function. Their purpose in vocational guidance is to aid in a suitable choice of occupation. No preparation for or experience in any occupation is assumed.

[1] Hughes, W. Hardin — "Organized Personnel Research and Its Bearing on High School Problems," *Journal of Educational Research*, 10:386–398, December, 1924.

An occupational proficiency test, as the name implies, is for the purpose of determining an individual's ability to perform the work of a specific occupation. Training for and experience in the occupation are assumed, and the test is designed to measure the results of these or to find out what stage of progress the individual has achieved. In a guidance program this type of test has its greatest value as an aid to the placement officer in deciding whether a pupil shall be recommended for a particular position requiring kncwn standards of proficiency.

In a sense all tests given by vocational teachers to their pupils are tests of occupational proficiency. The teacher in giving a test seeks to find out what the pupil can do in the occupation for which he is preparing. But teachers differ as to standards of attainment which should be expected upon completion of a given course of training, and differ still more in the tests they devise for measuring this attainment. They differ, also, in the way they rate the work done by a pupil both throughout the course and in the tests given. On these accounts the placement officer knows very little as to the actual vocational proficiency of pupils who come to him for assistance in finding employment, even though he has their ratings by vocational teachers. In this situation the need for standardized tests which can be rated objectively is very apparent.

A number of individuals have constructed and used tests of this character, and in some instances efforts have been made to extend the use and gain general acceptance of these tests. Especially has this been true in the case of stenography and typewriting. Among

the best known tests of proficiency in these subjects are those of Benge, Bills, Cody, Hoke, and Thurstone.

The army trade tests. The most comprehensive undertaking in the construction of occupational proficiency tests is found in the trade tests devised by the War Department of the United States Government during the World War.[1] In filling out the required blanks when he entered the army, each man was called upon to state his previous occupation. As workmen were needed for the different trades, men were selected and assigned upon the basis of these statements. It was soon found that men who had given their previous employment as electrician, for example, ranged all the way from novices to expert electricians. It became necessary to classify those who called themselves electricians, and those who professed other trades as well, so that when a worker of any grade was needed he could be selected at once. This gave rise to the trade tests by means of which four grades of workers were differentiated; novices who possessed practically no trade knowledge or skill; apprentices who showed a fair degree of proficiency in the trade; journeymen who could be relied upon to perform ordinary trade jobs satisfactorily; and expert workers who could be expected to meet any emergency in their field.

Three forms of tests were developed for each of nearly eighty trades. Psychologists, engineers, trade teachers, and expert trade workers coöperated in their preparation. One form, the oral trade test, consisted of a series of fifteen to twenty carefully chosen questions concerning materials, tools, machines, and pro-

[1] Chapman, J. Crosby. — *Trade Tests.*

cesses used in the trade, how these are used, and the principles underlying their use. The questions, requiring very brief answers (often a single word), were such that only a workman who had had extensive experience in the trade could make a high score in the test.

The second form of test, the picture trade test, consisted of an equally careful selection of pictures of tools, machines, and processes of the trade, which were shown one after the other to the subject. When a picture was shown the examiner asked a question about it which the subject was expected to answer promptly. It was believed that some trade workers would do better on this test than on the former for the reason that pictures make it easier for them to recall the actual work of the trade than do the oral questions.

The third form of test used was an actual performance test. This consisted of having the candidate do certain typical jobs of the occupation, and grading him carefully on each part of the work done. For example, a man taking the test for truck driver was directed, among other things, to drive forward through an " S " shaped curve, drive backward through the same curve, drive into a blind street on a hill and turn around without backing any more than necessary, and back up to a platform as if he were going to load his truck. Stakes five feet apart were placed on each side of the driveway and the number of stakes knocked over was taken into account in making up the driver's score. Other items taken into account were racing engine when starting or shifting, abrupt start, grinding of gears in shifting, jerky driving, unnecessary stopping of truck, more than one backing to reach platform,

stalling engine, etc. To be sure few occupations lend themselves as readily as truck driving to this form of test. In most skilled trades it is impossible to select a few jobs which can be completed in a reasonable length of time and which are so typical of the trade as a whole as to indicate general trade proficiency.

The development of standardized objective tests of occupational proficiency suitable for use in rating those who pursue any kind of vocational preparatory training in public schools seems entirely practicable, even though little progress in this direction has yet been made. If necessary, much more time could be used in giving these tests under school conditions than was possible in the case of the army trade tests. The most serious immediate difficulty appears to be that there is no agency which has the organization necessary to prepare the tests and the prestige necessary to bring about their general acceptance and use. However, it must not be forgotten that such tests measure only *present* proficiency. Taken alone, they give no indication of the candidate's possible improvement in the occupation in the future. The length of time he has spent in preparation for the occupation, his intelligence, any special aptitude he has shown, and such personal qualities as ambition, persistence, initiative, and carefulness should be taken into account in estimating the candidate's future possibilities in the occupation.

QUESTIONS AND EXERCISES

1. Pupil *A* graduated from high school with a good record. Pupil *B* dropped out of the same high school in the tenth grade. Does this prove anything concerning the general intelligence of

the two? Why? What does it indicate as probable? Why? Would the indication be more reliable or less so if *A* and *B* had been in different high schools, *A*'s high school having lower scholarship standards than *B*'s?

2. Why do not high school subjects provide satisfactory tests of special aptitudes?

3. What are the principal weaknesses for vocational guidance purposes of teachers' ratings of the personality traits of their pupils, as these ratings are usually prepared?

4. In what respects is the average vocational teacher's report unsatisfactory as a measure of the vocational proficiency of his pupils?

5. State the purpose of a standardized test of general intelligence or mental alertness and describe briefly one of the well-known tests.

6. One pupil with an intelligence rating of " A " and another with an intelligence rating of " C⁻," according to the Detroit Alpha tests, complete the sixth grade. Compare in a general way their chances of graduating from high school.

7. Draw the curves of distribution as to general intelligence for the pupils completing the sixth, eighth, ninth, and twelfth grades in Detroit as shown by the table on page 219.

8. Suggest a suitable method of dealing with a ninth-grade boy whose intelligence rating by the Army Alpha test is " C " and who is planning to be a doctor.

9. Suggest a suitable method of procedure in dealing with a seventh-grade girl whose intelligence rating is " A " and who plans to leave school for employment as soon as the law permits.

10. How do tests of special aptitudes differ in function from tests of general intelligence?

11. Describe briefly the methods used to measure aptitudes for some occupation.

12. Why have not aptitude tests been made part of the guidance program in every progressive school system?

13. Make as complete a list as you can of other personal qualities upon which vocational success depends besides general intelligence and special aptitudes.

14. In view of this long list of other qualities, is it worth while to attempt to measure general intelligence and special aptitudes for vocational guidance purposes? Give reasons for your answer.

15. What evidence is there that tests of personality traits may play an important part in a vocational guidance program? (See Watson, Goodwin B., "Character Tests in 1926," *Vocational Guidance Magazine*, April, 1927.)

16. In making use of personality and character ratings of pupils by their teacher, what precautions are necessary in order that these ratings may be of the greatest value?

17. What are the functions of standardized tests of occupational proficiency? Compare these tests with the well-known educational tests, such as those of arithmetic or spelling.

18. Describe briefly the Army Trade Tests. Why has not the work started in developing these tests been carried on by some agency since the war closed?

19. Are standardized objective tests of occupational performance likely to become an important part of a vocational guidance program? Explain your answer.

20. What information concerning the candidate's vocational history needs to be taken into account in connection with his score in an occupational performance test?

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CHAPTER XII

VOCATIONAL GUIDANCE IN RURAL COMMUNITIES

According to the last census almost one half of the population of the United States lives in rural communities, that is, upon farms or in villages of less than 2500 people. The specialist in rural education of the United States Bureau of Education is the authority for the statement that approximately nine million children from farm homes were enrolled in rural schools in 1924, and that a little less than twelve million were in rural schools in the open country and in villages and towns of 1000 population and under, where the environment was distinctly rural. In previous chapters the discussion has dealt with vocational guidance in cities, and more especially in cities which are large enough to maintain a fairly complete school organization. Is the problem of vocational guidance in rural communities different? If so, in what important respects? And how may a comprehensive program of guidance be provided in such communities?

The need for guidance in rural communities. Certainly rural boys and girls have as much need as their city cousins of assistance in choosing and entering suitable occupations. It does not follow that the boy who happens to live on a farm is best fitted for dairy farming because his father is engaged in that occupation, any

more than that a boy who lives in the city should become a plumber because his father is a plumber. The farmer's boy is more likely to follow his father's occupation because the family capital is tied up in land and barns and cows. But the chances are just as great that he is better fitted for some other type of farming or for some industrial, business, or professional occupation as that the plumber's son is better suited to some other occupation than plumbing. This being the case, the farmer's boy has just as much need of, and just as much right to, efficient vocational guidance.

In fact, country boys and girls generally have greater need of this assistance because of their limited opportunities to come into contact with and to observe other occupations than the type or types of farming carried on in their particular community. The city youth every day encounters workers in a variety of occupations and forms impressions, sometimes erroneous to be sure, of what is involved in the work done, of the types of people engaged in different kinds of work, and of other things that unconsciously influence his attitude towards the many occupations represented. The farm boy picks up more about one occupation — that of his father — and less about many occupations than does the city boy.

The same kinds of guidance service needed as in cities. The kinds of vocational guidance service needed by the country youth are, of course, the same as those needed by the city youth — assistance in obtaining reliable and significant information concerning occupations; opportunity for exploratory experiences in a number of typical occupations or

occupational fields; individual counsel by one who is fitted by personality and training for this work and who is able to base his advice upon fairly complete and accurate records of the pupil's health, intelligence, school attainment, special aptitudes and interests, personality traits, temperament, and home environment; assistance in planning for and obtaining the vocational preparation needed; assistance in entering advantageously the occupation chosen; and a certain amount of employment supervision during the early months of wage-earning in order that the best training may be obtained from the work done, that sound advice may be had as to how and where to obtain, outside of working hours, additional preparation for the work done and for promotion, and that assistance may be available in studying the situation and making readjustments if the work does not go well or if change of employment proves desirable. To be sure, more attention will be given in one case than in the other to information concerning the occupations of rural life, the exploratory experiences provided will differ, and the actual service rendered will differ in other respects; but the kinds of service needed in the two types of communities are identical.

Facilities for guidance work differ in city and country. The really important difference between the rural community and the city in the matter of vocational guidance is found in the facilities available for providing the guidance service which is needed.

The city, with its concentrated population and wealth, has its highly organized school system with a comparatively small board of education composed

usually of successful business and professional men and women, a superintendent, assistant superintendents, directors of special departments, supervisors of special subjects, principals of schools, and a large corps of teachers. It has large and well-appointed school buildings, extensive equipment, school and public libraries, supplies and materials as needed. It has provisions for physical examination of its children, for intelligence testing, for achievement testing, and for recording and preserving the results of all tests and examinations. It has numerous social agencies and organizations whose aims make them ready and valuable allies in a guidance program. It has immediately at hand a wide range of occupations — business, industrial, professional, public service, and personal service — which constitute a remarkable guidance laboratory.

The rural community with its small and scattered population and limited, often meager, financial resources, may have a one-room country school which offers the first eight grades of school work, or it may have either a consolidated or a village school with ten or twelve grades. In the one-room school the teacher is usually young, inexperienced, and possessed of little, if any, more than the legal minimum of training required in order to obtain a teacher's certificate. She teaches all grades from the first primary to the eighth, and conducts twenty-eight or thirty "recitations" per day. There is no school library and the pupils do not have access to a public library. There is no equipment except for the usual textbook work. The records kept concerning each pupil are extremely meager. In

most states there is little or no supervision, though the county superintendent, or commissioner, makes one or two visits during the year. The chances are about even that the teacher will stay only one year, and then another teacher with less experience will take her place. There may be only one and there are not likely to be more than five or six pupils in the seventh and eighth grades, the grades in which vocational interests begin to need special attention. There were approximately 4,750,000 pupils enrolled in 168,000 one-teacher schools in the United States in 1924.

Conditions in consolidated schools are usually far better than in one-teacher schools, though not so favorable to a comprehensive guidance service as in city school systems. Many consolidated schools are well organized, well equipped for the work offered, and do a high grade of work within the limitations of finance and of pupil enrollment, to which they are subject. There is a superintendent or principal who, in most cases, teaches certain hours each day and who may devote part of his time to supervision. The school is graded. Class periods are approximately as long as in city schools. Teachers are better prepared and stay longer than in one-room schools, though generally conditions in these respects are much less favorable than in the cities. Often there is a school library, and arrangements are sometimes made for the State or County circulating library to send selected collections of books. Some equipment is provided for prevocational and vocational courses. The " median " consolidated rural school in the United States has 280 pupils and eleven teachers. Thus there are enough older pupils to form

classes in the junior high school grades and in part or all of the senior high school grades. If the school does not maintain a full high school program, provision is often made to send pupils to a neighboring town or city with free tuition for the remaining years of the course. About 2,500,000 pupils were enrolled in the 14,000 consolidated schools of this country in 1924.

Finally, there is the village or small-town school in a rural setting. The facilities and the efficiency of the village school range all the way from those of the poorest one-teacher rural schools to those of the better consolidated schools. The United States Bureau of Education estimates that in 1924 there were 2,125,000 pupils in such schools. Not infrequently, school districts of this type combine with neighboring country districts to form a consolidated district.

An outstanding feature of the entire situation affecting all three types of rural schools is that each school is essentially an independent, self-contained unit. Theoretically, to be sure, the county superintendent of schools has general supervision over them, but practically, save in a few fortunate states, he has very limited authority over the selection of principals or teachers for particular schools, the salaries to be paid, the type of building to be built, or the equipment to be provided. These matters are decided by the local board in charge of each school. Whether consolidation shall take place and, if so, what districts shall be combined is largely a matter of popular vote in the districts affected. As far as supervision of instruction is concerned, in most states the county superintendent's authority is quite limited and his preparation usually

incomplete. He can spend but a few hours a year at the most in any one school and little if any provision is made to give him expert assistance in this work. The city school is part of a system which is large enough to command expert leadership; the rural school, of whatever type, is cut off from such leadership by its independence unless it is in a district of exceptional wealth or educational foresight or both.

Conditions far less favorable in the country. Taking the situation as a whole, then, conditions are decidedly less favorable in rural communities than in cities for the development of a comprehensive vocational guidance service, and far less favorable in communities which have one-teacher schools than in those which maintain consolidated schools. The city school system has the organization, the mass of pupils, the equipment, all under one highly centralized direction, which makes it comparatively easy to provide its pupils with occupational information, a variety of exploratory experiences, expert vocational counseling, vocational preparation, placement, and employment supervision. Rural schools, and one-teacher schools in particular, lack important facilities upon which the success of such a guidance service depends.

It does not follow, however, that the problem of vocational guidance in rural communities is hopeless. It is no more so than rural education itself of which it must become an integral part. And rural education, though notoriously inefficient today, is making steady progress. For example, the United States Bureau of Education reports that in recent years the number of consolidated schools has been increasing at the rate of

1000 per year and the number of one-teacher schools decreasing at the rate of nearly 4000 per year.

The county unit as aid to guidance work. Rural education, for its own sake as well as for the sake of vocational guidance in rural communities, is greatly in need of the county unit of organization, administration, and supervision. This should include a county board of education elected at large by the rural population, a county superintendent of schools chosen for a term of years by the board of education, and such a supervisory and clerical staff recommended by the superintendent and appointed by the board as the needs of the schools of the county may require. All questions of consolidation, type, and location of buildings, school equipment, and curriculum, in so far as it is not fixed by law, for the rural schools of the entire county should be settled by the county board upon recommendation of the superintendent. The superintendent should be responsible, also, for selection of teachers and choice of supplies, materials, etc. for all rural schools in the county. Consolidation would progress more rapidly and more wisely, expert supervision would become available in consolidated, village, and one-teacher schools and conditions in other respects would become more nearly comparable to those in city schools. Especially would conditions favor better facilities for the junior and senior high school period. The county unit plan of organization, already in effect in various forms in a few states, seems likely to be the means of making rural education in America really effective and at the same time to pave the way for an efficient vocational guidance service in rural communities.

The work of a county supervisor of guidance. The key to the vocational guidance problem under the county unit plan would be a well-qualified vocational supervisor, or assistant to the county superintendent, in charge of the guidance program. In some counties with small rural population, it might be necessary for him to perform other duties also, but he should realize that his chief responsibility is to provide as much assistance as possible to boys and girls in choosing, entering, and making progress in occupations. In addition to supervising the guidance program as a whole, he would serve in his territory as vocational counselor, placement officer, and supervisor of junior employment.

As vocational supervisor, he would plan a program which would provide for comprehensive guidance service in every rural school in the county where there are pupils in the seventh grade or above. He would see that the teacher best qualified for this work in each consolidated and village school is chosen to give a course in occupational information and to have local responsibility for other guidance activities. He would encourage these teachers to obtain special preparation for guidance work. He would assist them in securing for their schools a small but well-chosen collection of books and pamphlets concerning occupations, in securing occasional speakers on different types of farming and other occupations, and in planning trips for the purpose of supplementing class instruction. He might build up in his own office a larger library for circulation among the schools of his county, or arrange with the state circulating library or some other library to perform this service.

He would of course visit the occupational information classes, confer with the teachers individually concerning their work, arrange for occasional county-wide conferences of his teachers for discussion of their common problems, and perform such other duties as usually make supervision effective. He would supervise also the so-called prevocational and vocational courses offered in these schools — agricultural, commercial, home-making, and industrial arts — to the end that their exploratory and vocational preparatory values may be properly realized. Likewise, he would be responsible for such promotion and supervision of extra-curricular activities as seemed wise in order that these may offer suitable exploratory experiences, as discussed in Chapter VI.

The county supervisor as vocational counselor. In the matter of individual vocational counseling the county supervisor would work in close coöperation with the teachers under his supervision in the different schools. The teacher of occupational information naturally would discuss occupational choices with individual pupils and their parents. This teacher would also arrange for individual pupils and their parents to have conferences with the vocational supervisor when he visits the school. His training and experience in vocational guidance should be combined, in this work of counseling, with the local teacher's more intimate knowledge of the pupil and the pupil's home conditions. To this end he would discuss each case with the teacher before beginning the counseling interview. It is assumed that, through the work of the local school and of other supervisors from the county superintendent's

office, the pupil's health record, general intelligence record, and school achievement record are available and are reasonably accurate. Evidence of special aptitudes and interests should be at hand in the reports of exploratory experiences as obtained in special courses, in extracurricular activities, and in some cases in summer employment. The work of counseling would, of course, be carried through with full recognition of the fact that final responsibility for choice rests with the pupil, and the counselor's job is to assist him in discovering and evaluating the different factors that should be taken into account in reaching a decision.

The county supervisor as placement officer. As placement officer, the vocational supervisor would organize a plan by which the teachers under his supervision in the different schools would gather information concerning employment opportunities for young workers in their communities and forward it to his office. He would make arrangements for similar information to come to his office from the towns and cities in the county, or, still better, arrange with the vocational guidance office of each town and city for an exchange of service in this respect. He would find it desirable to establish similar relations with vocational supervisors in other neighboring counties. He would need to have an arrangement with the central placement office of the school system in one or two of the nearest large cities whereby his boys and girls who seek employment there may be aided. He would bring together in his office such information concerning each pupil as would be needed in placement work, and perform the actual work of placement in a manner similar to that described in Chapter VIII, with

due allowance for differences between his conditions and those of the city placement officer.

The county supervisor in follow-up work. Employment supervision, or follow-up work, will be a particularly difficult part of the county vocational supervisor's work. He can, and should, make it clear to his boys and girls before employment begins that his office stands ready to help them find out what further training will be useful to them in their jobs and for promotion and where and how to obtain this training while working. Every young worker who goes through his office should know, too, that he is welcome to return for advice if things do not go well with him, and for assistance in finding other employment if necessary. A few months after employment begins each young worker should be sent a letter asking for a report concerning his work and the training he is obtaining, and calling attention to the fact that the office is still at his service. Reports from the employers should be obtained also. In some cases later reports from both young worker and employer should be sought, though it must not be expected that replies will always be received. In all follow-up work care must be exercised to avoid coddling. The purpose is to aid the youth in finding himself, not to make him dependent upon the supervisor.

The supervisor and one-teacher schools. If any one-teacher schools should survive development of the county-unit plan as outlined, the vocational supervisor would work with the teachers in these schools in much the same manner as with the selected teachers in the consolidated schools. While conditions would be less favorable, he should see that the same kinds of guid-

ance service are provided as fully as possible to the limited number of boys and girls in each school. Supplying reference material and conferences with individual pupils and their parents would need special attention while there would be little chance to provide exploratory experiences or vocational preparation save in a narrow range of farming occupations.

Guidance possibilities without the county unit plan. Interesting as are the possibilities of providing a comprehensive vocational guidance service in rural communities under the county-unit plan of organization, administration, and supervision, it must be recognized that many years will elapse before the county-unit plan becomes general. Moreover the question of adequate financial support for such service as has been discussed is involved — support in which the state must share with the county if rural children are to have equal educational opportunities, of which guidance is a part, with city children. In the meantime what can be done for the boys and girls who are going out each year from the consolidated rural schools, which have two and one-half millions of pupils; the rural village schools, which have two and one-quarter millions of pupils; and the one-teacher schools with their four and three-quarters millions of pupils; nearly all with no chance of vocational guidance assistance from the county superintendent's office?

Principals and teachers in all these schools can be made aware, as they are not now aware, of the vocational guidance problem, of the needs of these boys and girls in this respect, and of how these needs are served in some communities. This can be done best by including

in the training of rural teachers and principals an introductory course in vocational guidance which stresses its rural aspects. Further training in the technique of guidance should be provided for those who are to do guidance work, but all should take this introductory course.

1. *In consolidated schools.* *a.* There can be in each consolidated and village school one individual, principal, or teacher, who is definitely charged with responsibility for guidance work, and who has time allowed in his daily schedule for this work. The amount of time allowed would depend upon the number of pupils in the junior and senior high school grades. Naturally, this individual would be one whose work is with high school boys and girls. He might be called the Vocational Counselor of the school.

b. A small collection of vocational information material can be brought together as part of the school library for use by the pupils.

c. A cumulative record card for each pupil can be kept from the first grade up which will furnish the counselor with much valuable data for use when considering the case of any particular pupil.

d. Under the right leadership by principal and counselor, the teachers can be made to realize that guidance is a school problem in which all should have a part, and not the counselor's problem only. The counselor can help each teacher to see what her part is.

e. The counselor can perform, as well as conditions and circumstances permit, the vocational guidance service outlined in discussing the county supervisor's work. In some aspects of the work, for example in

developing extracurricular activities for exploratory purposes, the assistance of other teachers would be sought. But the vocational counselor should assume leadership. Placement service and follow-up work, particularly outside the immediate community, will be difficult, but the alert counselor will find it possible to do some valuable work of this sort.

2. *In one-teacher schools.* In one-teacher schools, generally very little vocational guidance service can be expected where there is no county plan of organization and supervision. However, it is possible for a teacher, who through her preparation for teaching realizes the need and knows what may be done, to do valuable guidance work, even in this type of school. She can bring together a small reference library of occupational information material for her older pupils. She can study these pupils individually, talk with them about their occupational interests, and guide their reading and thinking on the subject of choosing a vocation. She can discuss the question with their parents. She may be able to arrange for each of them to talk, perhaps more than once, with a successful worker in an occupation of which this particular pupil is thinking. She can help those who make a definite choice of occupation before leaving her school to plan their preparation, or part of it. Occasionally she may be able to assist a pupil in obtaining exploratory experiences along the line of his vocational interests, or employment in an occupation he has chosen; but her opportunities for this kind of service will be very limited. Practically all her guidance work will have to be done outside school hours. In it all she should avoid giving the impression that a

vocational choice should be hurried, especially in case of those who are going on to high school. Nor should she allow her pupils to get the impression that a choice once made is necessarily final. She should be concerned most of all with helping her pupils to realize the importance of a wise choice and with giving them a method of procedure which is likely to result in such a choice.

Would guidance lure farm youth to the cities? Those who maintain that rural schools should be organized and conducted in such a manner as to keep farm boys and girls on the farm will look with disfavor upon such a program of vocational guidance as has been discussed in this chapter. They are likely to see in this program danger of luring young people from the farm to the cities by informing them about the vocational opportunities which are to be found there. On the contrary, a comprehensive guidance service in rural communities should result in keeping on the farm those who are suited to farm life, and should distribute these among the different types of farming according to their aptitudes and interests. It should result in attracting to city occupations only those who are better suited to these occupations than to farming. The opportunities and advantages of farming as well as the disadvantages, with which many farm boys and girls are already too familiar, would be emphasized. And the disadvantages of city occupations as well as their attractive features would come in for consideration. There is no reason to believe that more boys and girls would be attracted from the farm to the city under a wise guidance program than under the present haphazard influences. The difference should be that both those who go and those

who stay are the ones who would find the greatest profit and satisfaction personally and serve society best by going or staying, as the case might be. This is far better for rural community, for city, and for the individual concerned than trying, without discrimination, to keep farm youth upon the farm.

QUESTIONS AND EXERCISES

1. Is it true that country boys and girls are in as great need of vocational guidance as those who live in the cities? Are most of them destined to engage in farming? Would it be a mistake to interest them in other occupations?

2. Obtain from the United States Census reports for 1920 the following:

a. The number employed in all occupations in 1910 and 1920.

b. The number employed in agriculture, forestry, and animal husbandry in 1910 and 1920.

c. The total urban population in 1920.

d. The total rural population in 1920.

e. The urban population 5–20 years of age in 1920.

f. The rural population 5–20 years of age in 1920.

What evidence, if any, do you find in these figures of the necessity for large numbers of young people from rural districts to find employment in the cities?

3. Is specialization in farming increasing or decreasing? How does this affect the need for vocational guidance in rural communities?

4. In what respects are conditions less favorable in the country than in cities to an adequate program of vocational guidance? Are there respects in which conditions are more favorable in the country?

5. What are the advantages, for vocational guidance purposes, of the county unit of organization of rural education?

6. Is a county supervisor of vocational guidance practicable in many counties? Are funds for rural education too limited to

justify the necessary expenditure? Is there any reason to expect that conditions in this respect will improve with adoption of the county unit of organization?

7. Which, if any, of the functions of a county supervisor of vocational guidance, as discussed on pages 270–73, would be more difficult and which more easy to perform than would the same functions in a city guidance program? Why?

8. Without a county unit system and a county supervisor of guidance, can any vocational guidance work that is worth while be done in rural schools? If so, what? How is the training of rural teachers related to the problem?

9. Would not an adequate guidance program in rural schools result in a larger proportion of the capable youth leaving the farms for city occupations? Give reasons for your answer.

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CHAPTER XIII

VOCATIONAL GUIDANCE IN COLLEGES AND UNIVERSITIES

Colleges generally have ignored vocational guidance. Any observant professor in college or professional school could cite case after case of students planning to enter occupations for which they are obviously unsuited. And he could cite still more cases of former students who are not now pursuing the occupations for which they prepared. Our colleges and professional schools have been very ready to say to students who fail to measure up to academic standards: "You don't belong here." We have made very little effort to help these young men and women find out where they do belong. Nor, what is still more important, have we asked those who stay and do the work required of them, whether or not they ought to be doing this particular work rather than something else. Many a time we have tried, and been perfectly satisfied in trying, to make an engineer out of a man better suited to be an accountant. And too often when the course of training was completed we have waved a hasty "Good-bye, I wish you luck," and turned to the next year's class, leaving the inexperienced graduate to flounder into any kind of position he may, regardless of whether it calls for the priceless native capacity he possesses or the costly training he has obtained.

President Angell[1] recently stated the situation as far as the literary college is concerned in the following language:

"It is an extraordinary circumstance that so large a portion of our students come up to the spring of their senior year with little or no plan for the future, with no decision as to the field of work which they will enter and frequently with little or no knowledge of what opportunities are offered by the world of affairs to the college graduate. This is peculiarly striking in an institution where approximately a third of their classmates are partly or wholly self-supporting. As time goes on, the day arrives when they simply must have a job and so they jump at the first one which comes along, regardless of the likelihood that they can succeed in it. Now a certain amount of the rough and tumble at the outset of life is doubtless a good thing for many types of men, and it is certainly impossible by any device now available to predict with confidence what calling any given individual will find satisfying and in what one he will succeed. Nevertheless, our present procedure in the whole matter is highly irrational and deserving of radical alteration."

Need for guidance in college, however much may be done earlier. No doubt the need for vocational guidance in college and university will be lessened to some extent when public school systems generally maintain a comprehensive guidance service; but the problem will still remain important in higher institutions of learning, however much may be done in the lower schools. Many will still find it desirable to postpone the decision

[1] Report of the President of Yale University, 1924–25.

until the college period, and some who have made a choice will encounter experiences which make it necessary or wise to reconsider the whole question, while nearly all in college and professional school alike are concerned with making as advantageous an entry as possible into the occupation chosen.

Many choose vocations while in college. The extent to which college men who have had no systematic vocational guidance in high school face the question of choosing an occupation after entering college was shown by Keppel as long ago as 1910. Keppel found that out of 519 members of the 1908–09–10 classes of Dartmouth College and Columbia College who answered his inquiry, 216 reported that they had entered college with an occupation chosen and had made no change in choice since entering. Assuming that none of the 216 reconsidered the question while in college, a highly improbable assumption, slightly more than 58 per cent found it necessary to give more or less serious thought to choosing an occupation while pursuing the college course. And this does not take account of the nearly 300 who failed to answer Keppel's inquiry nor of the many who entered with these classes and were eliminated before reaching the senior year. Among these two groups the percentage was probably higher.

Similar studies made more recently in other colleges under different conditions show a somewhat smaller percentage entering without a definite choice of occupation. The most extensive and complete of these studies was made by Harris[1] in 1923–24. Harris found that of

[1] Harris, Walter L. — "The Problem of Vocational Guidance and Placement in the University of Michigan." Unpublished.

801 freshmen (about one half the class) who entered the College of Literature, Science, and the Arts of the University of Michigan in September 1923, 36.8 per cent had not then chosen an occupation. If allowance is made for changes in plans during the college course, as in Keppel's study, the percentage of those who face the question of a choice while in college would be increased markedly. It should be noted further that Harris estimated, upon the basis of other information gathered from these same freshmen, that only approximately one half of those who reported a definite choice " had thought the matter through and had adequate information about their proposed vocations."

In colleges of engineering, where it is presumed that all students enter with a choice of vocational field, if not of specific profession within that field, it was found in 1925 by the Society for Promotion of Engineering Education[1] that only about 28 per cent of those who enter complete the course four years later and less than 40 per cent complete it at all, — a preparation which is practically a *sine qua non* for practicing engineering. And a study made recently at two well-known colleges of engineering revealed the fact that of those who graduated five years earlier, between 60 and 65 per cent were not engaged in engineering when the study was made. The 1925 study made by the Society for Promotion of Engineering Education showed that of 3933 graduates of the classes of 1922, 1923, and 1924 (43 institutions) the percentage remaining in the special field of engineering for which preparation had been made varied from

[1] Society for the Promotion of Engineering Education. "Study of Admissions and Eliminations of Engineering Students."

50 per cent for chemical engineering to 83.3 per cent for civil engineering. But the 3933 graduates who answered the inquiry were only 47.9 per cent of those canvassed. More than one half of the recent graduates failed to reply. Among these the percentage who have changed to other fields must be very much larger.

In a large medical school it is expected that 25 per cent of those who enter as freshmen will never complete the course, even after 60 per cent of those who apply for admission are rejected. This means that three out of ten of those who apply for admission are graduated from this particular school. No doubt many of those who are refused admission and some of those who drop out after starting the course go to other medical schools; but there must be a large per cent who give up medicine and face the choice of another occupation. Then too, those who succeed in their medical course must choose between general practice and the many special lines of medical practice that have developed in recent decades.

The curriculum and vocational choices. In any college there is a variety of influences which affect students' choices of vocations. Among these the curriculum probably is most important. Students who fail to measure up to required standards in the subjects which they take are obliged to change their plans for an education, and frequently give up a more or less strongly cherished vocational choice at the same time. This applies with greater force to those who fail in professional schools, where failure practically compels a change in vocational choice. " Scholastic failure " is given as the reason for more than one half of the elimination from

colleges of engineering in the study referred to above. Even serious difficulty with, or distaste for, a college subject though not ending in failure sometimes results in a change of vocational plans. On the other hand, success in college work, and still more in professional school work, tends to confirm choices already made. And a student's success in a particular subject often determines his choice of occupation, even at the cost of giving up a previous choice. Keppel found that of 87 who changed their vocational plans during the college course, 16 did so because they "disliked the sample received in college," and 25 changed "because of the irresistible attraction of some college subject." Development of the elective system and the offering of a greater variety of college subjects in recent years have made the college curriculum a more valuable factor in influencing occupational choices.

Aside from providing the curriculum, college authorities have done practically nothing in an official way until very recent years to aid their students in choosing occupations. And, indeed, they have not provided the curriculum for this purpose. Probably nothing has been farther from the thoughts of most professors who were responsible for determining college curricula than that the college offerings should aid students in this important matter. Occasionally individual professors have given individual students vocational advice, usually advice to the brilliant student to specialize in the subject taught by the particular professor who gives the advice. But Keppel found only one student out of 519 who had received and followed vocational advice from one of his professors. Most of them seemed surprised

that anyone should expect the college to aid in choosing a vocation.

Other influences affecting choice. Prominent among the unofficial influences of college life that affect choice of career are extracurricular activities, associations with fellow students who have definite plans for the future, the part-time employment in which students engage in order to help finance their education, and, more recently, student committees on vocational guidance sponsored by such organizations as Young Men's and Young Women's Christian Associations. Most important of these are extracurricular activities — those activities organized and conducted by the students themselves in order to make college life more interesting and to provide an outlet for expression of natural interests which are not given a chance in the regular college work. It is a significant commentary on present-day college education that students find it necessary, or at least desirable, to organize and maintain these so-called " side-shows," which appear more attractive and more worth while to many students than the program in the main tent. The educative and exploratory values of extracurricular activities are just beginning to be recognized by college authorities. It is probable that the time is not far distant when many of these activities will be brought into the curriculum or credit allowed for them in some other way. It would be fortunate if every student were obliged to participate in a certain number of such activities of his own choosing during the college course.

Placement service by colleges. Colleges and universities generally have done more in assisting their

graduates to obtain positions than in helping their students to choose vocations. Even this service, however, has usually been haphazard and unorganized, except in case of those students preparing to teach. Hopkins,[1] in his recent study of the student personnel activities of fourteen well-known universities and colleges, rated the placement work of only one institution as "of enough significance to make it worth while for other institutions to learn about it." In seven institutions something was being done in a creditable but not outstanding manner, and in six institutions nothing effective was being done. Most larger institutions and many of the smaller ones maintain appointment bureaus for teachers. Some of these bureaus are well organized and fairly efficient. But the best of them have not yet developed scientific methods of rating their candidates or of obtaining information concerning vacancies for which to recommend them. Heads of departments in professional schools, and sometimes in literary colleges, are asked by employers to recommend graduates for positions. Often large manufacturing and business concerns send representatives to colleges and universities in the spring of the year to select prospective graduates for work in their organizations. This practice prevails especially in colleges of engineering and schools and departments of business administration. But heads of departments, to whom these representatives are usually referred, are busy with other matters and untrained in selecting men. Most of them know little about their students aside from the grades

[1] Hopkins, L. B. — "Personnel Prodecure in Education," *The Educational Record Supplement*, October, 1926.

they have made in the department, and often less about the genuineness of the opportunities offered by the proposed employment. Nor is there any systematic plan for following up these graduates to see whether they make good, and whether the employer makes good in providing the opportunities claimed. A graduate of the literary college of a state university who had stressed business administration in his college work, a young man of good ability, obtained employment in this way with a company of national reputation, thinking he was going into their business offices. Instead, he was made foreman of the dill room in a pickle factory where he remained for six or eight months before finding work more to his liking. Forgotten by his university and exploited by the company that employed him, he was emphatic in his criticism of the " aid " given him by his alma mater in finding his place in the business world.

Beginnings of systematic guidance in colleges. 1. *At Oberlin.* Within recent years a number of colleges and universities have undertaken in an organized way to provide more or less vocational guidance service for their students. The nature and amount of this service and the organization for providing it differ greatly with different institutions. Oberlin started in 1913 with a " vocational secretary for women " whose duties as defined by herself were " to investigate vocational opportunities suited to college women, and conditions of employment; to get information in regard to graduate and vocational schools and in regard to scholarships and fellowships in universities and elsewhere, and to inform myself on the relation of the student's major electives to her choice of vocation,"

2. *At Stanford University.* In the same year, 1913, a faculty committee on vocational guidance was appointed at Stanford University. Both Oberlin and Stanford, the former in 1917 and the latter in 1919, published handbooks descriptive of occupations open to college graduates. The Stanford committee has also established in the University library a section of books, pamphlets, and bibliographies relating to vocations; provided occasional talks on particular vocations; held vocational conferences on opportunities other than teaching open to women; and arranged individual conferences between students and members of the faculty. Also, each student is expected to fill out a vocational guidance blank when he registers in the University.

3. *At Dartmouth.* Dartmouth College, about 1920, appointed an Associate Dean, whose title was later changed to Director of Personnel Research, to develop a vocational guidance program for that institution. It became the duty of this officer to bring together the large amount of information on file in different departments of the college about each individual student — from his registration card valuable facts concerning his earlier life; from the physical director's office the record of his physical condition; from the dean's office his record of scholarship, prizes, honors, and delinquencies; from the department of psychology a record of his intelligence rating based on the test given each autumn to the freshman class; and from members of the faculty a personal estimate of his intelligence, aggressiveness, reliability, and personality. With these data at hand the director aims to have at least one private interview with each undergraduate every year.

As described by Husband, the first director, " an interview with a freshman takes the form of an analysis of his scholarship, his physical condition, his intelligence test, his interests and activities, his choice of a life career and his plans of preparation for it. All known facts about the individual are used in ascertaining the fitness of the individual for any suggested occupation. His experience up to date is considered and analyzed, and finally each student is urged strongly to take some position involving regular work during the summer vacation for the purpose of trying himself out, of avoiding idleness, and of increasing his sense of responsibility and regularity." [1]

4. *At Northwestern University.* At Northwestern University an extensive program of student personnel work of which vocational guidance is an important part, has been in process of development since 1922. A director, officially responsible to the President only, is in charge and is assisted by a staff of several members. While the work done is similar to that at Dartmouth it appears to be more completely organized, to give more attention to gathering first-hand information concerning occupations, and to placement.

5. *At Goucher College.* Since the college year of 1920–21 Goucher College has had a central office to act as a clearing house for all of the vocational activities of the college. This office is under the direction of a professor of Social Economics, who bears the title of Vocational Advisor. A full-time vocational secretary and a clerical assistant complete the staff. This office con-

[1] Husband, Richard W. — "Occupational Advice," *Dartmouth College Magazine*, January, 1921.

ducts vocational interviews with students, collects accurate information concerning vocational opportunities for women, arranges part-time try-out employment in Baltimore for its students, carries on the usual work of a college appointment bureau, and follows up each graduate carefully during her first year out of college.

6. *At Vassar College.* Vassar College maintains a Vocational Bureau, with a Director in charge who has the same professional standing as a full professor. The Director, Zita L. Thornbury, recently described the work of the Bureau thus:

"The Vassar College Vocational Bureau is organized as an essential part of the academic administration of the college. The vocational interests of students and of alumnae are registered in interviews and on records in the office, which serves as a center for vocational information and advice. Placements are made for summer and after graduation. The individual student's problem is of first importance and an effort is made to advise and direct along the lines of her greatest development whether it be for further study, travel, complete change in activities or associations, or actual placement in a given position. The same kind of personal service is extended to alumnae who are directed to the proper sources for aid if the Bureau fails to provide the necessary help.

"A very definite effort is always being made to bring before the students a fair and comprehensive picture of useful work to be done during the summer vacations and after the college course is complete. The need of technical or professional training to be begun, at times, early in the course and continued after graduation is

made clear for certain types of work. Annually a general Vocational Conference is held at the college, not presuming to cover all professions or lines of work equally well, but to stimulate general interest and to provoke questions, at least. The Conferences are largely attended. Representatives from academic, social, and business institutions are received during the year and interviews are arranged for students who would profit by firsthand information in a given field.

"The Bureau is the general center for recommendations for students and graduates, and those who register and arrange to have credentials collected for them may at any time have their references sent out to a given address."

At the annual conference held in February, 1927, under the auspices of a student committee and sponsored by the Vocational Bureau, the following subjects were discussed:

Opportunities for College Graduates in the Field of Psychology.

Some Experiences of College Graduates in Business Statistics and in Economic Research.

Opportunities in Librarianship.

Opportunities for College Women in Social Work.

Nursing — A Profession for College Women.

The Creative Use of Environment in Experimental Education.

Opportunities in Retailing.

The Community House, a Social Holding Company.

Teaching.

Opportunities for College Women in the Art Professions.

Opportunities for Women in Science in Fields other than Teaching.

Stage — or Theater?

Bond Selling and Other Work for College Women in Banks.

The leader in each case was a prominent worker in the occupation represented, and in every case but one, a woman. Arrangements were made for students to interview the conference leaders.

Many other higher educational institutions have either inaugurated vocational guidance programs or are in the process of working out plans for such programs.

A suggested comprehensive plan. Here is ample evidence of a rapidly growing interest on the part of college and university authorities in the problem of vocational guidance for their students. The ultimate type of organization for the work is not yet clear. No doubt it will differ in important respects in different institutions. Nor are the elements of a comprehensive program of vocational guidance for a college or university determined as yet. Some tendencies, however, both with respect to organization and with respect to what will be recognized as a comprehensive program, are becoming fairly clear. On the basis of present tendencies in the higher educational institutions and of developments in public school programs of vocational guidance it seems reasonable to expect that a comprehensive program in colleges and universities may include the following:

1. *Vocational information service.* This service may well include development of a library of books, pamphlets, and other material concerning occupations of interest to college students, and provision for gathering pertinent information about occupations not adequately covered in the printed material. The library material should be easily accessible, preferably on open shelves adjacent to the vocational guidance offices. Students should understand that needed information will be obtained for them if it is not available in the library, or that they will be directed where to find it. The information service should also cover specific employment opportunities. The standing of those firms which, by letter or by personal representative, seek college graduates, and whether these firms provide good opportunities or simply exploit the graduates whom they employ are subjects upon which information should be obtained and made available to students when needed. In fact upon the basis of this information some companies should be denied the privilege of recruiting employees on the campus. Information concerning vacancies might be obtained systematically from alumni, students, employers of former students, and others.

2. *Information service concerning individual students.* The purpose of this service is to have available for study and for use in counseling interviews and in placement work such personal data as may be needed. The student's record in schools previously attended, his physical examination and health record, his general intelligence as shown by a test given at entrance to college, the subjects pursued in college with his grades in

each, his disciplinary record in college, semester reports on his extracurricular activities with a rating by the one in charge of each activity, a self-analysis of his personality and other qualities, a personality rating by his instructors, his employment record before entering college and in part-time work while in college, a record of his summer vacation activities whether employed or not, and his choice of occupation with the plans he has made to prepare for it are among the data which should be brought together.

3. *Vocational counseling service.* This service consists of interviews with individual students, as often as conditions may warrant, on matters affecting vocational choice and preparation. If an occupation has been chosen, its suitability would be considered in the light of information available concerning the occupation and the student. The student might be led to compare his analysis of himself with the requirements of the occupation and with the personality ratings of his instructors. Possible improvements in personality would be considered. The student's plans for preparation and for self-improvement after entering the occupation would receive attention. If no choice of occupation has been made, attention naturally would be given to a plan of procedure in making a choice and to sources of information concerning occupations which have some interest for the student. There would be consideration with the student of his aptitudes and interests as revealed by high school, college, and employment record. The question of possible improvements in personality would claim attention the same as in case an occupation has already been chosen. All students who are required to

leave college because of unsatisfactory work should have a vocational counseling interview before dismissal.

4. *Placement service.* The placement service should include all kinds of occupations suited to college students and not teaching only, as is the case now in many colleges. It should be available to those who leave without graduating as well as to those who complete the course. It should include part-time and summer employment as well as permanent employment. Part-time and summer employment could be used to some extent, and should be used as fully as possible, as a means by which students try themselves out in occupations already chosen or under consideration. Students should understand that the college will do its best to assist them in finding a suitable position but that it does not guarantee to do so.

5. *Adjustment service.* When a student passes from college to employment there is a period of adjustment to new duties and a new environment. This is true whether or not his occupation is well chosen and his entry into it advantageous. The college, by following up its students for a year or more, can help them to carry over into their work, and into their leisure also, the habits of study and investigation which were developed during their college years. Suggestions may be given as to the type of training needed and where to obtain it in order to attack most successfully the problems of their daily work or to prepare for those ahead. If the student's occupation proves to be unsuitable or his first position in it unfortunate, he should be expected to look to his alma mater for expert help in diagnosing the situation and making the necessary readjustments, with due

regard to his assets in training and experience. A service of this sort will call for occasional reports during the first year or so from former students and their employers. In addition to the aid this service will furnish to former students it will also provide a means of checking up on the effectiveness of the whole guidance program and providing suggestions for improvement.

6. *Research.* No college or university program of vocational guidance can be considered comprehensive which does not provide for research. Investigations are needed that deal with organization and administration of a guidance program. The technique of counseling and placement calls for extensive study. Occupational information needs to be gathered and evaluated. Far more light is needed on the significance of intelligence ratings for vocational guidance. Better means of determining special aptitudes are called for. Methods of obtaining more reliable ratings of personality traits of students are necessary. The possibility of providing vocational exploratory experiences for college students calls for investigation. And many problems worthy of intensive study cluster around adjustment service for those who have been placed through a guidance program. The nature of vocational guidance and its relation to business, industrial, and professional life are such that it must cultivate the spirit and methods of research.

The necessary organization. In order to carry on such a program successfully it will be necessary for the college or university to maintain a central office whose principal, if not sole responsibility, is vocational guidance. It matters little whether this be called

a personnel office, a bureau of personnel research, a vocational guidance office, or something else. The important thing is that there shall be centralized responsibility and authority for the work to be done. In a large university composed of several schools and colleges it may be wise to maintain placement offices in some of these units, but if so, these offices should be coördinated and supervised by the central office. This office should be of equal rank with the offices of dean of men and dean of women but entirely free from their disciplinary implications. Direction of such a program calls for personal and executive qualities of a high order coupled with keen appreciation of and ability in research. In a large institution the staff will include the necessary specialists for different kinds of work and ample clerical assistance.

Some college professors oppose a vocational guidance program of this character. They maintain that college is not a vocational preparatory institution but one for providing a liberal education, and that already too much attention is given in the colleges to the vocational interests of students. In reality, however, the program discussed above merely recognizes facts and conditions as they are. As pointed out earlier in this book, vocational guidance is an integral part of education. We have seen, also, that choosing and entering upon a career are vital questions to college men and women. One way to put greater meaning and effectiveness into the work of the college is to recognize frankly and attack scientifically the problems involved in the transfer of students from college to vocation.

QUESTIONS AND EXERCISES

1. How do you account for the fact that not until recently have colleges assumed any responsibility for helping their students to choose occupations?

2. A college dean recently expressed himself as follows: "I don't believe in vocational guidance for college students. In the first place, they don't need it. In the second place, no one is justified in saying to one student you should enter this vocation and to another you should enter that vocation." Do you agree with the dean? Why, or why not? What is wrong with his conception of vocational guidance?

3. Cite illustrations from the experience of college acquaintances, if possible, of vocational choices which were influenced by: (*a*) the subjects taken in college; (*b*) the extracurricular activities of college life; (*c*) Summer or part-time employment while attending college.

4. What relation have orientation courses, recently introduced in the freshman year of many colleges, to educational and vocational guidance?

5. Report briefly upon organized vocational guidance work in some other college or university than those mentioned in this chapter.

6. How can the cost of such a program of vocational guidance in college and university as outlined in this chapter be justified? (See questions on Chapter II.)

7. What adjustment service could his alma mater have given the young man mentioned on page 32 when he gave up law and became a lathe-hand? Is it probable that, had such a guidance program as here proposed been maintained by his alma mater, he would have prepared for law? Why or why not?

8. Would a follow-up of college graduates for a year or two after employment begins tend to conserve valuable results of the college training? If so, how? Would not this follow-up be too paternalistic? Should not college graduates be thrown

entirely upon their own resources and allowed to sink or swim?

9. Some maintain that whatever organized vocational guidance work is done by a college or university should be in charge of the dean of men and dean of women. What advantages, if any, over this arrangement has a special office for vocational guidance?

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